

CATALOG

2011-2012

Curriculum and  
Course Descriptions



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**AA DEGREE PROGRAM(S) IN LIBERAL ARTS**

Curriculum Requirements		
<b>Code:</b> AA.LA.GEN <b>Degree:</b> AA <b>Program:</b> Liberal Arts  ASSOCIATE IN ARTS (A.A.) DEGREE IN LIBERAL ARTS To earn the A.A. Degree in Liberal Arts, a student must meet the following curriculum requirements:		
Area of Study	Credits	Course Description
Communication	9	WRT-101 English Composition I (3 cr.) WRT-201 English Composition II (3 cr.) COM-100 Speech Communication (3 cr.)
History	6	Two general education courses (6 cr.) in History (HIS)
Humanities	9	Three general education courses (9 cr.) to be selected from the following fields, with no more than two courses (6 cr.) in any one field: Arts (Art [ART], Music [MUS], Theatre Arts [THR], Cinema Studies [CIN]) Literature (LIT) Philosophy and Religion (PHR) World Languages and Cultures (LAN)
Social Sciences	6	Two general education courses (6 cr.) to be selected from the following fields, with no more than one course (3 cr.) in any one field: Economics (ECO) Geography (GEO) Political Science (POL) Psychology (PSY) Sociology (SOC) and Anthropology (ANT)
Mathematics, Natural Sciences, and Technology	12-14	One 4-cr. General education course in Mathematics (MAT) Or two 3-cr. General education courses in Mathematics (MAT) or Computer Science (CIS), one of which must be in Mathematics (MAT)  Two general education courses (8 cr.) to be selected from the following fields: Biology (BIO) Chemistry (CHM) Physics (PHY)
Diversity Requirement*	3	In completing the BCC General Education Program a student must take and pass one 3-credit course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from one of the following: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.
Total GE Credits	45-47	
AA/LA Program Requirements	15	Two or three courses (6-9 cr.) to be selected from the following fields: Arts (Art [ART], Music [MUS], Theatre Arts [THR], Cinema Studies [CIN]) Literature (LIT) Philosophy and Religion (PHR) World Languages and Cultures (LAN)  Two or three courses (6-9 cr.) to be selected from the following fields: Economics (ECO) Geography (GEO) Political Science (POL) Psychology (PSY) Sociology (SOC) and Anthropology (ANT)
Free Electives	2-6	Programs can make recommendations in footnotes.
Total Credits	64-66	

\*Selection of a Diversity Course in History will not reduce the 6-credit Foundation Requirement in History – in that event, the student will end up with a total of 9 Foundation credits in History; selection of a Diversity Course in Humanities will not reduce the 9-credit Foundation requirement in Humanities – in that event, the student will end up with a total of 12 Foundation credits in the Humanities; and selection of a Diversity course in the Social Sciences will not reduce the 6-credit Foundation Requirement in Social Sciences – in that event, the student will end up with a total of 9 Foundation credits in the Social Sciences. In any event, s/he must meet the total Foundation requirement of 45-47 credits.

**Code: AA.LA.GEN**  
**Degree: AA**  
**Liberal Arts, General Curriculum**

<b>First Semester</b>		
HIS...	History Elective *	3
.....	Humanities Elective **	3
MAT...	Mathematics Elective *	3-4†
COM-100	Speech Communication	3
WRT-101	English Composition I	3
<b>Total: 15-16</b>		
<b>Second Semester</b>		
HIS...	History Elective *	3
.....	Humanities Elective **	3
MAT/CIS...	Mathematics/Computer Science Elective *	
	or	3-4†
.....	Free Elective	
WRT-201	English Composition II	3
.....	Social Science Elective ***	3
.....	Diversity Elective ■	3
<b>Total: 18-19</b>		
<b>Third Semester</b>		
.....	Humanities Elective	3
.....	Humanities Elective **	3
.....	Natural Science Elective *	4
.....	Social Science Elective ***	3
.....	Social Science Elective	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
.....	Humanities Elective	3
.....	Natural Science Elective *	4
.....	Social Science Elective	3
.....	Humanities or Social Science Elective	3
.....	Free Elective ±	2-4
<b>Total: 15-17</b>		

**Degree Total Credits: 64-66**

\* General Education Elective

\*\* Humanities Electives: Three general education courses selected from the following fields, with no more than two courses in any one field: Arts [ART], Music [MUS], Theatre Arts [THR], Cinema Studies [CIN]; Literature [LIT]; Philosophy and Religion [PHR]; World Languages and Cultures [LAN]

\*\*\* Social Science Electives: Two general education courses selected from the following fields, with no more than one course in any one field: Economics [ECO]; Geography [GEO]; Political Science [POL]; Psychology [PSY]; Sociology [SOC]; Anthropology [ANT]

†If a student's first-semester Mathematics elective is a 3-credit course, then s/he is required to select a second 3- or 4-credit elective in Mathematics or Computer Science; and if a student's first-semester Mathematics elective is a 4-credit course, then s/he is required to take a 3-credit Free Elective in the second semester [which may be a second Mathematics elective.]

■ **Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

±Recommended: Cornerstone/Capstone/Success Course

**Code: AA.LA.CINST**

**Degree: AA**

**Liberal Arts, Cinema Studies Option**

<b>First Semester</b>		
CIN/THR-140	Introduction to Cinema	3
HIS...	History Elective *	3
MAT....	Mathematics Elective *	3-4†
COM-100	Speech Communication	3
WRT-101	English Composition I	3
<b>Total: 15-16</b>		
<b>Second Semester</b>		
CIN-150	Special Topics in Cinema I	3
.....	Humanities Elective **	3
MAT/CIS...	Mathematics/Computer Science Elective *	
	or	3-4†
.....	Free Elective	
WRT-201	English Composition II	3
.....	Social Science Elective	3
.....	Diversity Elective ■	3
<b>Total: 18-19</b>		
<b>Third Semester</b>		
CIN-160	Women in Cinema	
	or	3
CIN-170	American Cinema	
HIS...	History Elective *	3
.....	Natural Science Elective *	4
.....	Social Science Electives *	6
<b>Total: 16</b>		
<b>Fourth Semester</b>		
CIN-250	Special Topics in Cinema II	3
.....	Natural Science Elective *	4
.....	Humanities Elective **	3
.....	Social Science Elective *	3
.....	Free Elective ±	2-4
<b>Total: 15-17</b>		

**Degree Total Credits: 64-66**

\* General Education Elective

\*\* General Education Elective in Arts, Literature, Philosophy & Religion, or World Languages

†If a student's first-semester Mathematics elective is a 3-credit course, then s/he is required to select a second 3- or 4-credit elective in Mathematics or Computer Science; and if a student's first-semester Mathematics elective is a 4-credit course, then s/he is required to take a 3-credit Free Elective in the second semester [which may be a second Mathematics elective.]

±Recommended: Cornerstone/Capstone/Success Course

■ **Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

**Code: AA.LA.COMM**  
**Degree: AA**  
**Liberal Arts, Communication Arts Option**

<b>First Semester</b>		
HIS...	History Elective *	3
.....	Humanities Electives *	6
MAT/CIS...	Mathematics/Computer Science Elective *	3
WEX-101	Dynamics of Health and Fitness	2
WRT-101	English Composition I	3
<b>Total: 17</b>		
<b>Second Semester</b>		
HIS...	History Elective *	3
.....	Humanities Electives *	3
MAT/CIS...	Mathematics/Computer Science Elective *	3
WEX...	Dynamics of Health and Fitness Experience	1
WRT-201	English Composition II	3
.....	Social Science Elective *	3
<b>Total: 16</b>		
<b>Third Semester</b>		
COM...	Communication Elective †	3
.....	Humanities Electives *	6
.....	Natural Sciences Elective *	4
.....	Social Science Elective *	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
COM...	Communication Elective ‡	3
.....	Humanities Electives *	6
.....	Natural Sciences Elective *	4
.....	Social Science Elective *	3
<b>Total: 16</b>		
<b>Degree Total Credits: 64-66</b>		

\* General Education Elective

†COM-101 Mass Media of Communication recommended

‡Select any Mass Communications (COM) course

**Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

**Code: AA.LA.ECON**  
**Degree: AA**  
**Liberal Arts, Economics Option**

<b>First Semester</b>		
ECO-101	Macroeconomics	3
COM-100	Speech Communication	3
WRT-101	English Composition I	3
.....	Humanities Elective *	3
MAT...	Mathematics Elective *	3-4†
<b>Total: 15-16</b>		
<b>Second Semester</b>		
.....	Social Science Elective *	3
HIS...	History Elective *	3
.....	Humanities Elective *	3
MAT/CIS...	Mathematics/Computer Science Elective *	
	or	3-4†
.....	Free Elective	
WRT-201	English Composition II	3
.....	Diversity Elective ■	3
<b>Total: 18-19</b>		
<b>Third Semester</b>		
ECO...	Economics Electives †	6
.....	Humanities Elective *	3
.....	Natural Science Elective *	4
HIS...	History Elective *	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
ECO...	Economics Elective †	3
.....	Humanities Electives *	6
.....	Natural Science Elective *	4
.....	Free Elective ±	2-4
<b>Total: 15-17</b>		

**Degree Total Credits: 64-66**

\* General Education Elective

**Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

■ **Diversity Elective for this Program:** Recommended – GEO-101, HIS-121, SOC-121, or SOC-122.

†If a student's first-semester Mathematics elective is a 3-credit course, then s/he is required to select a second 3- or 4-credit elective in Mathematics or Computer Science; and if a student's first-semester Mathematics elective is a 4-credit course, then s/he is required to take a 3-credit Free Elective in the second semester [which may be a second Mathematics elective.] Recommended: MAT-150 and MAT-223.

†Choose from: ECO-201, ECO-103, ECO-461, ECO-462, BNF-101, BNF-201, BNF-207

±Recommended: Cornerstone/Capstone/Success Course or another ECO or BNF course

**Code: AA.LA.GLOBAL.STUD**  
**Degree: AA**  
**Liberal Arts, Global Studies Option**

<b>First Semester</b>		
LAN...	Language Elective **	3
HIS...	History Elective †	3
MAT....	Mathematics Elective *	3-4†
COM-100	Speech Communication	3
WRT-101	English Composition I	3

**Total: 15-16**

<b>Second Semester</b>		
LAN...	Language Elective **	3
HIS...	History Elective †	3
MAT/CIS...	Mathematics/Computer Science Elective *	
	or	3-4†
.....	Free Elective	
WRT-201	English Composition II	3
.....	Social Science Elective †	3
ANT-101	Cultural Anthropology ■	3

**Total: 18-19**

<b>Third Semester</b>		
LAN...	Language Elective **	3
LIT...	Literature Elective	3
PHR...	Philosophy Elective †	3
.....	Social Science Elective †	4
.....	Natural Science Elective *	3

**Total: 16**

<b>Fourth Semester</b>		
.....	Language Elective	3
GEO-101	World Geography	3
SOC-222	Ethnic and Minority Group Relations	3
.....	Natural Science Elective *	4
.....	Free Elective ±	2-4

**Total: 15-17**

**Degree Total Credits: 64-66**

\*General Education Elective

\*\* World Language Elective: Any General Education LAN Level I or higher course. Students can take four semesters of the same language or two semesters each of two different languages.

**Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

■ **Diversity Elective for this Program** – Recommended – PHR-106, PHR-121, PHR-122, PHR-124, PHR-125, or PHR-126.

†If a student's first-semester Mathematics elective is a 3-credit course, then s/he is required to select a second 3- or 4-credit elective in Mathematics or Computer Science; and if a student's first-semester Mathematics elective is a 4-credit course, then s/he is required to take a 3-credit Free Elective in the second semester [which may be a second Mathematics elective.]

‡ Choose from – History: HIS-101, HIS-102, HIS-106, HIS-107, HIS-121, HIS-124, HIS-126, HIS-131, HIS-135, or HIS-145; Philosophy: PHR-106, PHR-121, PHR-124, PHR-125, OR PHR-126; Social Science: POL-102 or POL-103, and SOC-101

±Recommended: Cornerstone/Capstone/Success Course or another Language Course

**Code: AA.LA.HIST**  
**Degree: AA**  
**Liberal Arts, History Option**

**First Semester**

HIS-101	History of Western Civilization to the Reformation **	3
	or	
HIS-111	United States History to Reconstruction **	3
MAT...	Mathematics Elective *	3-4†
COM-100	Speech Communication	3
WRT-101	English Composition I	3
GEO-101	World Geography	3

**Total: 15-16**

**Second Semester**

HIS-102	History of Western Civilization since Reformation**	3
	or	
HIS-112	United States History since Reconstruction**	3
HIS...	History Elective	3
MAT/CIS...	Mathematics/Computer Science Elective *	3-4†
.....	Free Elective	
WRT-201	English Composition II	3
.....	Humanities Elective [non-history]	3
.....	Social Science Elective †	3

**Total: 18-19**

**Third Semester**

HIS...	History Elective	3
PHR...	Philosophy and Religion Elective	3
.....	Humanities Elective [non-history]	3
.....	Natural Science Elective *	4
.....	Social Science Elective †	3

**Total: 16**

**Fourth Semester**

.....	Language Elective	3
GEO-101	World Geography ■	3
SOC-222	Ethnic and Minority Group Relations	3
.....	Natural Science Elective *	4
.....	Free Elective ±	2-4

**Total: 15-17**

**Degree Total Credits: 64-66**

\* General Education Elective

\*\* History concentrators must complete 15 credits in history. This includes a one-year sequence in a single field of study. HIS-101-102 *Western Civilization* or HIS-111-112 *United State History* survey is recommended; however, HIS-106-108 *Modern Europe*, HIS-113-114 *20<sup>th</sup> Century U.S.*, or HIS-130-131 *Latin American History* is also acceptable. Students are encouraged to take a broad range of history courses both chronologically and geographically.

†If a student's first-semester Mathematics elective is a 3-credit course, then s/he is required to select a second 3- or 4-credit elective in Mathematics or Computer Science; and if a student's first-semester Mathematics elective is a 4-credit course, then s/he is required to take a 3-credit Free Elective in the second semester [which may be a second Mathematics elective.]

‡ For the Social Science Electives it is recommended students take courses in Anthropology, Sociology, and Economics.

±Recommended: Cornerstone/Capstone/Success Course or another History Course

**Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

■ **Diversity Elective for this Program**

**Code: AA.LA.LAS**

**Degree: AA**

**Liberal Arts, Latin American Studies**

**First Semester**

HIS-102	History of Western Civilization since Reformation	3
PHR-111	Social & Political Philosophy	3
MAT...	Mathematics Elective *	3-4†
COM-100	Speech Communication	3
WRT-101	English Composition I	3

**Total: 15-16**

**Second Semester**

HIS-111	U.S. History to Reconstruction	3
POL-102	International Relations	3
MAT/CIS...	Mathematics/Computer Science Elective *	
	or	3-4†
.....	Free Elective	
WRT-201	English Composition II	3
GEO-101	World Geography ■	3
HIS-130	Latin American History to Independence	
	or	3
HIS-132	The Spanish Speaking Caribbean & Central America since 1898	

**Total: 18-19**

**Third Semester**

HIS-131	Latin American History since Independence	3
LAN-231	Intermediate Spanish I	
	or	3
LAN-228	Elementary Spanish for Heritage Speakers	
SOC-101	Sociology	3
.....	Natural Science Elective *	4
LIT-223	Contemporary Latin American Literature	
	or	3
LAN-236	Survey of Spanish-American Literature	

**Total: 16**

**Fourth Semester**

ECO-101	Macroeconomics	3
.....	Natural Science Elective *	4
LAN-232	Intermediate Spanish II	
	or	3
LAN-229	Intermediate Spanish for Heritage Speakers	
LAN-233	Spanish Conversation	3
.....	Free Elective ±	2-4

**Total: 15-17**

**Degree Total Credits: 64-66**

\*General Education Elective

†If a student's first-semester Mathematics elective is a 3-credit course, then s/he is required to select a second 3- or 4-credit elective in Mathematics or Computer Science; and if a student's first-semester Mathematics elective is a 4-credit course, then s/he is required to take a 3-credit Free Elective in the second semester [which may be a second Mathematics elective.]

**Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

■ **Diversity Elective for this Program**

±Recommended: Cornerstone/Capstone/Success Course

**Students may take the CLEP exam to earn LAN credits**

**Code: AA.LA.LIT**  
**Degree: AA**  
**Liberal Arts, Literature Option**

<b>First Semester</b>		
HIS...	History Elective *	3
.....	Humanities Elective *	3
MAT/CIS...	Mathematics/Computer Science Elective *	3
COM-100	Speech Communication	3
WEX-101	Dynamics of Health and Fitness	2
WRT-101	English Composition I	3
<b>Total: 17</b>		
<b>Second Semester</b>		
LIT...	Literature Elective *	3
HIS...	History Elective *	3
MAT/CIS...	Mathematics/Computer Science Elective *	3
WEX...	Dynamics of Health & Fitness Experience *	1
WRT-201	English Composition II	3
.....	Social Science Elective *	3
<b>Total: 16</b>		
<b>Third Semester</b>		
LIT...	Literature Elective*	3
.....	Humanities Electives *	6
.....	Natural Science Elective *	4
.....	Social Science Elective *	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
LIT...	Literature Electives	6
.....	Humanities Elective *	3
.....	Natural Science Elective *	4
.....	Social Science Elective *	3
<b>Total: 16</b>		
<b>Degree Total Credits: 64-66</b>		

\* General Education Elective

**Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

**Code: AA.LA.PHIL**  
**Degree: AA**  
**Liberal Arts, Religion Option**

<b>First Semester</b>		
PHR-101	Introduction to Philosophy	3
HIS...	History Elective *	3
MAT....	Mathematics Elective *	3-4†
COM-100	Speech Communication	3
WRT-101	English Composition I	3
<b>Total: 15-16</b>		
<b>Second Semester</b>		
PHR...	Philosophy Elective **	3
HIS...	History Elective *	3
MAT/CIS...	Mathematics/Computer Science Elective *	
	or	3-4†
.....	Free Elective	
WRT-201	English Composition II	3
.....	Social Science Elective *	3
.....	Diversity Elective ■	3
<b>Total: 18-19</b>		
<b>Third Semester</b>		
PHR...	Philosophy Electives	6
.....	Humanities Elective [not in Philosophy/Religion]*	3
.....	Natural Science Elective *	4
.....	Social Science Elective *	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
.....	Philosophy Elective	3
.....	Natural Science Elective *	4
.....	Social Science Electives	6
.....	Free Elective ±	2-4
<b>Total: 15-17</b>		
<b>Degree Total Credits: 64-66</b>		

\*General Education Elective

\*\* PHR-103 Basic Logic Recommended

**Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

■ **Diversity Elective for this Program** – Recommended: PHR-106, PHR-121, PHR-122, PHR-124, PHR-125, or PHR-126

†If a student's first-semester Mathematics elective is a 3-credit course, then s/he is required to select a second 3- or 4-credit elective in Mathematics or Computer Science; and if a student's first-semester Mathematics elective is a 4-credit course, then s/he is required to take a 3-credit Free Elective in the second semester [which may be a second Mathematics elective.]

±Recommended: Cornerstone/Capstone/Success Course or another Philosophy Course

**Code: AA.LA.POLI.SCI****Degree: AA****Liberal Arts, Political Science Option**

<b>First Semester</b>		
POL-107	Introduction to Politics	3
COM-100	Speech Communication	3
WRT-101	English Composition I	3
.....	Humanities Elective *	3
MAT...	Mathematics Elective *	3-4†
<b>Total: 15-16</b>		
<b>Second Semester</b>		
SOC-101	Sociology	3
WRT-201	English Composition II	3
HIS...	History Elective *	3
.....	Humanities Elective *	3
MAT/CIS...	Mathematics/Computer Science Elective *	
	or	3-4†
.....	Free Elective	
.....	Diversity Elective ■	3
<b>Total: 18-19</b>		
<b>Third Semester</b>		
POL...	Political Science Elective	3
POL-101	American Government	3
.....	Humanities Elective *	3
.....	Natural Science Elective *	4
HIS...	History Elective *	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
POL...	Political Science Elective	3
.....	Humanities Electives *	6
.....	Natural Science Elective *	4
.....	Free Elective ±	2-4
<b>Total: 15-17</b>		
<b>Degree Total Credits: 64-66</b>		

\* General Education Elective

†If a student's first-semester Mathematics elective is a 3-credit course, then s/he is required to select a second 3- or 4-credit elective in Mathematics or Computer Science; and if a student's first-semester Mathematics elective is a 4-credit course, then s/he is required to take a 3-credit Free Elective in the second semester [which may be a second Mathematics elective.] MAT-150 Statistics I is recommended.

■ **Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

±Recommended: Cornerstone/Capstone/Success Course

**Code: AA.LA.PSY****Degree: AA****Liberal Arts, Psychology Option**

<b>First Semester</b>		
PSY-101	General Psychology	3
COM-100	Speech Communication	3
WRT-101	English Composition I	3
.....	Humanities Elective *	3
MAT...	Mathematics Elective *	3-4†
<b>Total: 15-16</b>		
<b>Second Semester</b>		
SOC-101	Sociology	3
WRT-201	English Composition II	3
HIS...	History Elective *	3
MAT/CIS...	Mathematics/Computer Science Elective *	
	or	3-4†
.....	Free Elective	
.....	Humanities Elective *	
.....	Diversity Elective ■	3
<b>Total: 18-19</b>		
<b>Third Semester</b>		
PSY...	Psychology Electives †	6
.....	Humanities Elective *	3
.....	Natural Science Elective *	4
HIS...	History Elective *	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
PSY...	Psychology Elective †	3
.....	Humanities Electives *	6
.....	Natural Science Elective *	4
.....	Free Elective ±	2-4
<b>Total: 15-17</b>		

**Degree Total Credits: 64-66**

\* General Education Elective

**Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

■ **Diversity Elective for this Program** – Recommended: PSY-110, PSY-207, SOC-120, SOC-121, or SOC-122.

† If a student's first-semester Mathematics elective is a 3-credit course, then s/he is required to select a second 3- or 4-credit elective in Mathematics or Computer Science; and if a student's first-semester Mathematics elective is a 4-credit course, then s/he is required to take a 3-credit Free Elective in the second semester [which may be a second Mathematics elective.] Recommended: MAT-150 and MAT-223.

† PSY-102 Introduction to Abnormal Psychology, and either PSY-106 Developmental Psychology or PSY-201 Child Psychology

± Recommended: Cornerstone/Capstone/Success Course or another Psychology course

**Code: AA.LA.REL**  
**Degree: AA**  
**Liberal Arts, Religion Option**

<b>First Semester</b>		
PHR-120	Introduction to Religion	3
HIS...	History Elective *	3
MAT....	Mathematics Elective *	3-4†
COM-100	Speech Communication	3
WRT-101	English Composition I	3
<b>Total: 15-16</b>		
<b>Second Semester</b>		
PHR-121	Religions of the World	3
HIS...	History Elective *	3
MAT/CIS...	Mathematics/Computer Science Elective *	
	or	3-4†
.....	Free Elective	
WRT-201	English Composition II	3
.....	Social Science Elective *	3
.....	Diversity Elective ■	3
<b>Total: 18-19</b>		
<b>Third Semester</b>		
PHR...	Religion Electives	6
.....	Humanities Elective [not in Philosophy/Religion]*	3
.....	Natural Science Elective *	4
.....	Social Science Elective *	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
PHR...	Religion Elective	3
.....	Natural Science Elective *	4
.....	Social Science Electives	6
.....	Free Elective ±	2-4
<b>Total: 15-17</b>		

**Degree Total Credits: 64-66**

\*General Education Elective

**Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

■ **Diversity Elective for this Program** – Recommended: PHR-106, PHR-122, PHR-124, PHR-125, or PHR-126

† If a student's first-semester Mathematics elective is a 3-credit course, then s/he is required to select a second 3- or 4-credit elective in Mathematics or Computer Science; and if a student's first-semester Mathematics elective is a 4-credit course, then s/he is required to take a 3-credit Free Elective in the second semester [which may be a second Mathematics elective.]

± Recommended: Cornerstone/Capstone/Success Course

**Code: AA.LA.SOC****Degree: AA****Liberal Arts, Sociology Option**

<b>First Semester</b>		
SOC-101	Sociology	3
COM-100	Speech Communication	3
WRT-101	English Composition I	3
.....	Humanities Elective *	3
MAT...	Mathematics Elective *	3-4†
<b>Total: 15-16</b>		
<b>Second Semester</b>		
PSY-101	General Psychology	3
HIS...	History Elective *	3
.....	Humanities Elective *	3
MAT/CIS...	Mathematics/Computer Science Elective *	
	or	3-4†
.....	Free Elective	
WRT-201	English Composition II	3
.....	Diversity Elective ■	3
<b>Total: 18-19</b>		
<b>Third Semester</b>		
SOC...	Sociology Electives	6
.....	Humanities Elective *	3
.....	Natural Science Elective *	4
HIS...	History Elective *	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
SOC...	Sociology Elective	3
.....	Humanities Electives *	6
.....	Natural Science Elective *	4
.....	Free Elective ±	2-4
<b>Total: 15-17</b>		

**Degree Total Credits: 64-66**

\*General Education Elective

**Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

■ **Diversity Elective for this Program** –Recommended that students take SOC-120, SOC-121, SOC-222, ANT-100, ANT-101, PSY-110, PSY-207

†If a student's first-semester Mathematics elective is a 3-credit course, then s/he is required to select a second 3- or 4-credit elective in Mathematics or Computer Science; and if a student's first-semester Mathematics elective is a 4-credit course, then s/he is required to take a 3-credit Free Elective in the second semester [which may be a second Mathematics elective.] Recommended: MAT-150 and MAT-223.

±Recommended: Cornerstone/Capstone/Success Course or another Sociology course

**Code: AA.LA.SOC.SCI****Degree: AA****Liberal Arts, Social Sciences Option**

<b>First Semester</b>		
SOC...	Social Science Elective *	3
COM-100	Speech Communication	3
WRT-101	English Composition I	3
.....	Humanities Elective *	3
MAT...	Mathematics Elective *	3-4†

**Total: 15-16**

<b>Second Semester</b>		
SOC...	Social Science Elective *	3
HIS...	History Elective *	3
.....	Humanities Elective *	3
MAT/CIS...	Mathematics/Computer Science Elective *	
	or	3-4†
.....	Free Elective	
WRT-201	English Composition II	3
.....	Diversity Elective ■	3

**Total: 18-19**

<b>Third Semester</b>		
SOC...	Social Science Electives	6
.....	Humanities Elective *	3
.....	Natural Science Elective *	4
HIS...	History Elective *	3

**Total: 16**

<b>Fourth Semester</b>		
SOC...	Social Science Elective	3
.....	Humanities Electives	6
.....	Natural Science Elective *	4
.....	Free Elective ±	2-4

**Total: 15-17****Degree Total Credits: 64-66**

\* General Education Elective

**Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

■ **Diversity Elective for this Program** –Recommended that students take a 3-credit course from the General Education Diversity Electives in ANT, ECO, POL, PSY, or SOC

†If a student's first-semester Mathematics elective is a 3-credit course, then s/he is required to select a second 3- or 4-credit elective in Mathematics or Computer Science; and if a student's first-semester Mathematics elective is a 4-credit course, then s/he is required to take a 3-credit Free Elective in the second semester [which may be a second Mathematics elective.] Recommended: MAT-150 and MAT-223.

±Recommended: Cornerstone/Capstone/Success Course or another Social Science course

**Code: AA.LA.WLAN**

**Degree: AA**

**Liberal Arts, World Languages and Cultures Option**

<b>First Semester</b>		
LAN...	Language Elective †	3
HIS...	History Elective	3
MAT...	Mathematics Elective *	3-4†
COM-100	Speech Communication	3
WRT-101	English Composition I	3
<b>Total: 15-16</b>		
<b>Second Semester</b>		
LAN...	Language Elective †	3
HIS...	History Elective	3
MAT/CIS...	Mathematics/Computer Science Elective *	
	or	3-4†
.....	Free Elective	
WRT-201	English Composition II	3
ANT-101	Cultural Anthropology ■	3
SOC-101	Sociology	3
<b>Total: 18-19</b>		
<b>Third Semester</b>		
LAN...	Language Elective †	3
LIT...	Literature Elective	3
.....	Humanities Electives *	3
.....	Social Science Elective *	3
.....	Natural Science Elective *	4
<b>Total: 16</b>		
<b>Fourth Semester</b>		
LAN...	Language Elective †	3
GEO-101	World Geography	3
SOC-222	Ethnic and Minority Group Relations	3
.....	Natural Science Elective *	4
.....	Free Electives	2-4
<b>Total: 15-17</b>		

**Degree Total Credits: 64-66**

\* General Education Elective

† World Language Elective – Students must complete either four semesters of the same World Language or two semesters each of two different World Languages.

† If a student's first-semester Mathematics elective is a 3-credit course, then s/he is required to select a second 3- or 4-credit elective in Mathematics or Computer Science, and if a student's first-semester Mathematics elective is a 4-credit course, then s/he is required to take a 3-credit Free Elective in the second semester [which may be a second Mathematics elective.]

**Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

■ **Diversity Elective for this Program** – ANT-101 Cultural Anthropology

**Code: AA.LA.WMST**  
**Degree: AA**  
**Liberal Arts, Women Studies Option**

<b>First Semester</b>		
WRT-101	English Composition I	3
COM-100	Speech Communication	3
HIS-105	Women in History	3
WEX-101	Dynamics of Health and Fitness	2
MAT ...	Mathematics Elective *	3-4†
<b>Total: 14-15</b>		
<b>Second Semester</b>		
WRT-201	English Composition II	3
PSY-101	General Psychology	3
HIS-116	Women in American History	3
ANT-101	Cultural Anthropology	3
	or	3
SOC-101	Sociology	3
MAT/CIS...	Mathematics/Computer Science Elective*	3-4†
	or	3-4†
.....	Free Elective	3-4†
<b>Total: 15-16</b>		
<b>Third Semester</b>		
LIT-228	Women in Literature	3
PSY-207	Psychology of Women	3
.....	Humanities Electives	6
WEX-2..	Dynamics of Health and Fitness Experience	1
.....	Natural Science Elective*	4
<b>Total: 17</b>		
<b>Fourth Semester</b>		
CIN-160	Women in Cinema [Spring offering only]	3
PHR-122	Women and Religion	3
SOC-121	Changing Roles of Women	3
.....	Humanities Elective	3
.....	Natural Science Elective	4
.....	Free Elective ‡	2-4
<b>Total: 18-19</b>		

**Degree Total Credits: 64-67**

\*General Education Elective

† If a student's first-semester Mathematics elective is a 3-credit course, then s/he is required to select a second 3- or 4-credit elective in Mathematics or Computer Science, and if a student's first-semester Mathematics elective is a 4-credit course, then s/he is required to take a 3-credit Free Elective in the second semester [which may be a second Mathematics elective.]

**Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

‡ Recommended: Cornerstone/Capstone/Success course

**AA DEGREE PROGRAM(S) IN FINE AND PERFORMING ARTS**

Curriculum Requirements		
<b>Code:</b> AA.FPA.ART <b>Degree:</b> AA <b>Program:</b> Fine and Performing Arts  ASSOCIATE IN ARTS (A.A.) DEGREE IN FINE AND PERFORMING ARTS To earn the A.A. Degree in Fine and Performing Arts, a student must meet the following curriculum requirements:		
Area of Study	Credits	Course Description
Communication	9	WRT-101 English Composition I (3 cr.) WRT-201 English Composition II (3 cr.) COM-100 Speech Communication (3 cr.)
History	6	Two general education courses (6 cr.) in History (HIS)
Humanities	9	Three general education courses (9 cr.) to be selected from the following fields, with no more than two courses (6 cr.) in any one field: Arts (Art [ART], Music [MUS], Theatre Arts [THR], Cinema Studies [CIN]) Literature (LIT) Philosophy and Religion (PHR) World Languages and Cultures (LAN)
Social Sciences	6	Two general education courses (6 cr.) to be selected from the following fields, with no more than one course (3 cr.) in any one field: Economics (ECO) Geography (GEO) Political Science (POL) Psychology (PSY) Sociology (SOC) and Anthropology (ANT)
Mathematics, Natural Sciences, and Technology	12-14	One 4-cr. General education course in Mathematics (MAT) Or two 3-cr. General education courses in Mathematics (MAT) or Computer Science (CIS), one of which must be in Mathematics (MAT)  Two general education courses (8 cr.) to be selected from the following fields: Biology (BIO) Chemistry (CHM) Physics (PHY)
Diversity Requirement*	3	In completing the BCC General Education Program a student must take and pass one 3-credit course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from one of the following: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.
Total GE Credits	45-47	
AA/FPA Program Requirements	14-16	To be assigned in accordance with the needs of the program.
Free Electives	2-6	Programs can make recommendations in footnotes.
Total Credits	64-66	

\*Selection of a Diversity Course in History will not reduce the 6-credit Foundation Requirement in History – in that event, the student will end up with a total of 9 Foundation credits in History; selection of a Diversity Course in Humanities will not reduce the 9-credit Foundation requirement in Humanities – in that event, the student will end up with a total of 12 Foundation credits in the Humanities; and selection of a Diversity course in the Social Sciences will not reduce the 6-credit Foundation Requirement in Social Sciences – in that event, the student will end up with a total of 9 Foundation credits in the Social Sciences. In any event, s/he must meet the total Foundation requirement of 45-47 credits.

**Code: AA.FPA.GEN**  
**Degree: AA**  
**Fine and Performing Arts, General Curriculum**

<b>First Semester</b>		
HIS...	History Elective *	3
.....	Humanities Elective **	3
MAT...	Mathematics Elective *	3-4†
WRT-101	English Composition I	3
COM-100	Speech Communication	3
<b>Total: 15-16</b>		
<b>Second Semester</b>		
HIS...	History Elective *	3
.....	Humanities Elective **	3
MAT/CIS...	Mathematics/Computer Science Elective *	
	or	3-4†
.....	Free Elective	
WRT-201	English Composition II	3
.....	Social Science Elective *	3
.....	Diversity Elective ■	3
<b>Total: 18-19</b>		
<b>Third Semester</b>		
.....	Humanities Elective **	3
.....	Natural Science Elective *	4
.....	Social Science Elective *	3
.....	Program Requirement	3
.....	Program Requirement	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
.....	Natural Science Elective *	4
.....	Program Requirement	3
.....	Program Requirement	3
.....	Program Requirement	3
.....	Free Elective ‡	2-4
<b>Total: 15-17</b>		

**Degree Total Credits: 61-66**

\*General Education Elective

\*\*General Education Electives in Arts, Literature, Philosophy & Religion, or World Languages

† If a student's first semester Mathematics elective is a 3-credit course, then s/he is required to select a second 3- or 4-credit elective in the second semester in Mathematics or Computer Science; and if a student's first-semester Mathematics elective is a 4-credit course, then s/he is required to take a 3-credit Free elective in the second semester [which may be a second Mathematics elective]

‡ Recommended: Cornerstone/Capstone/Success Course or another course in the program's major

■ **Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

**Code: AA.FPA.ART**  
**Degree: AA**  
**Fine and Performing Arts, Art Option**

<b>First Semester</b>		
ART-122	Two-Dimensional Design	3
ART-123	Life Drawing I	
	or	
ART-124	Drawing Fundamentals	
COM-100	Speech Communication	3
WRT-101	English Composition I	3
MAT...	Mathematics Elective *	3-4†
<b>Total: 15-16</b>		
<b>Second Semester</b>		
HIS...	History Elective *	3
MAT/CIS...	Mathematics/Computer Science Elective *	
	or	3-4†
.....	Free Elective	
WRT-201	English Composition II	3
ART...	Art History Elective ***	3
.....	Diversity Elective ■	3
ART...	Studio Art Elective ◆	3
<b>Total: 18-19</b>		
<b>Third Semester</b>		
ART...	Art History Elective ***	3
.....	Natural Science Elective *	4
.....	Social Science Elective *	3
ART...	Studio Art Elective ◆	3
.....	Social Science Elective *	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
.....	Natural Science Elective *	4
ART...	Studio Art Elective ◆	3
.....	Humanities Elective **	3
HIS...	History Elective *	3
.....	Free Elective ±	2-4
<b>Total: 15-17</b>		

**Degree Total Credits: 64-66**

\*General Education Elective

\*\* General Education Electives in Arts, Literature, Philosophy & Religion, or World Languages

†If a student's first-semester Mathematics elective is a 3-credit course, then s/he is required to select a second 3- or 4-credit elective in Mathematics or Computer Science; and if a student's first-semester Mathematics elective is a 4-credit course, then s/he is required to take a 3-credit Free Elective in the second semester [which may be a second Mathematics elective.]

\*\*\*Humanities General Education Electives in Art History include ART-102 History of Art and Visual Culture to 1400, ART-103 History of Art and Visual Culture from 1400-1900, ART-104 History of Photography, or ART-110 Contemporary Art

◆Studio Art Electives include: ART-123 Life Drawing I, ART-124 Drawing Fundamentals, ART-127 Painting I, ART-181 Photography I, ART-184 Digital Photography, ART-192 Computer 3D Animation I, ART-189 Computer 2D Illustration, ART-197 Computer Imaging; ART-223 Life Drawing II, ART-226 Letterform and Type, ART-228 Painting II, ART-229 Painting III, ART-259 Computer Graphics for the Web Developer, ART-260 Graphic Design I, ART-281 Photography II,, ART-287 Computer Layout I, ART-288 Computer Layout II, ART-290 Computer 2D Animation I, ART-291 Computer 2D Animation II, ART-292 Computer 3D Animation II, ART-298 Interactive Multimedia

■ **Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

**Code: AA.FPA.CINST**  
**Degree: AA**  
**Fine and Performing Arts, Cinema Studies Option**

<b>First Semester</b>		
CIN/THR-140	Introduction to Cinema	3
HIS...	History Elective *	3
MAT....	Mathematics Elective *	3-4†
COM-100	Speech Communication	3
WRT-101	English Composition I	3
<b>Total: 15-16</b>		
<b>Second Semester</b>		
CIN-150	Special Topics in Cinema I	3
WRT-201	English Composition II	3
.....	Humanities Elective **	3
.....	Social Science Elective *	3
MAT/CIS...	Mathematics/Computer Science Elective *	
	or	3-4†
.....	Free Elective	
.....	Diversity Elective ■	3
<b>Total: 18-19</b>		
<b>Third Semester</b>		
CIN-160	Women in Cinema	
	or	3
CIN-170	American Cinema	
HIS...	History Elective *	3
.....	Natural Science Elective *	4
.....	Social Science Electives *	6
<b>Total: 16</b>		
<b>Fourth Semester</b>		
CIN-250	Special Topics in Cinema II	3
.....	Natural Science Elective *	4
.....	Cinema Studies Elective ***	3
.....	Humanities Elective *	3
.....	Free Elective ±	2-4
<b>Total: 15-17</b>		

**Degree Total Credits: 64-66**

\*General Education Elective

\*\*General Education Elective in Arts, Literature, Philosophy & Religion, or World Languages

\*\*\*CIN-150 Special Topics I Cinema or CIN-250 Special Topics in Cinema II can be taken twice for separate credit as long as the topic is different from a previously taken course.

†If a student's first-semester Mathematics elective is a 3-credit course, then s/he is required to select a second 3- or 4-credit elective in Mathematics or Computer Science; and if a student's first-semester Mathematics elective is a 4-credit course, then s/he is required to take a 3-credit Free Elective in the second semester [which may be a second Mathematics elective.]

■ **Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

±Recommended: Cornerstone/Capstone/Success Course

**Code: AA.FPA.MUSC**

**Degree: AA**

**Fine and Performing Arts, Music Option**

<b>First Semester</b>		
MUS-131	Class Piano I	2
MUA-1..	Applied Music I	1
MUS-1..	Performance Ensemble I	1
WRT-101	English Composition I	3
COM-100	Speech Communication	3
.....	Humanities Elective*	3
HIS...	History Elective *	3

**Total: 16**

<b>Second Semester</b>		
MUS-231	Class Piano II	2
MUA-2..	Applied Music II	1
MUS-2..	Performance Ensemble II	1
WRT-201	English Composition II	3
HIS...	History Elective *	3
MAT...	Mathematics Elective *	3-4
.....	Humanities Elective *	3

**Total: 16-17**

<b>Third Semester</b>		
MUS-132	Music Theory I	2
MUS-134	Ear Training and Musicianship I	2
.....	Diversity Elective ■	3
.....	Humanities Elective *	3
.....	Natural Science Elective *	4
.....	Social Science Elective *	3

**Total: 17**

<b>Fourth Semester</b>		
MUS-232	Music Theory II	2
MUS-234	Ear Training and Musicianship II	2
.....	Natural Science Elective *	4
.....	Humanities Elective *	3
.....	Social Science Elective *	3
.....	Free Elective	3

**Total: 17**

**Degree Total Credits: 64-66**

\*General Education Elective

■ **Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

**Code: AA.FPA.THTR**  
**Degree: AA**  
**Fine and Performing Arts, General Theatre Arts Option**

<b>First Semester</b>		
.....	Humanities Elective*	3
COM-100	Speech Communication	3
THR-110	Basic Acting Technique	3
THR-131	Introduction to Stagecraft and Lighting	3
WRT-101	English Composition I	3
<b>Total: 15</b>		
<b>Second Semester</b>		
.....	Humanities Elective *	3
MAT/CIS...	Mathematics/Computer Science Elective	3-4
.....	Social Science Elective	3
THR-120	Stage Makeup	1
THR-113	Movement for the Performing Artists	
	or	
THR-220	Scene Study	
	or	2-3
THR-124	Dance Experience	
	or	
THR-231	Stage Electrics	
WRT-201	English Composition II	3
<b>Total: 15-17</b>		
<b>Third Semester</b>		
HIS...	History Elective	3
.....	Humanities Elective *	3
.....	Natural Science Elective	4
MAT...	Mathematics Elective	3
THR-214	Audition Techniques	
	or	2
THR-217	Theatre Performance & Production	
.....	Free Elective **	2
<b>Total: 17</b>		
<b>Fourth Semester</b>		
HIS...	History Elective	3
.....	Natural Science Elective	4
.....	Social Science Elective	3
.....	Diversity Elective ■	3
THR-216	Theatre Production Workshop	
	or	3-4
THR-215	Directing for the Stage	
<b>Total: 16-17</b>		

**Degree Total Credits: 63-66**

\* Recommended Humanities Electives – THR-101, MUS-110, THR-109, THR-140

\*\* Recommended – COM-106, DFT-210, THR-236, WEX-...

■ **Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

Code: AA.FPA.THTR.ACT

Degree: AA

Fine and Performing Arts, Theatre Arts – Acting Option

<b>First Semester</b>		
.....	Humanities Elective*	3
COM-100	Speech Communication	3
THR-110	Basic Acting Techniques	3
THR-131	Introduction to Stagecraft and Lighting	3
WRT-101	English Composition I	3

**Total: 15**

<b>Second Semester</b>		
.....	Humanities Elective *	3
MAT/CIS...	Mathematics/Computer Science Elective	3-4
.....	Social Science Elective	3
THR-113	Movement for the Performing Artists	2
THR-220	Scene Study	3
WRT-201	English Composition II	3

**Total: 17-18**

<b>Third Semester</b>		
HIS...	History Elective	3
.....	Humanities Elective *	3
.....	Natural Science Elective	4
MAT...	Mathematics Elective	3
.....	Free Elective **	2
THR-214	Audition Techniques	
	or	2
THR-217	Theatre Performance & Production	

**Total: 17**

<b>Fourth Semester</b>		
HIS...	History Elective	3
.....	Natural Science Elective	4
.....	Social Science Elective	3
.....	Diversity Elective ■	3
THR-216	Theatre Production Workshop	
	or	3-4
THR-215	Directing for the Stage	
THR-120	Stage Makeup	1

**Total: 17-18**

**Degree Total Credits: 64-66**

\* Recommended Humanities Electives – THR-101, MUS-110, THR-109, THR-140

\*\* Recommended – COM-106, DFT-210, THR-236, WEX-...

■ **Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

**Code: AA.FPA.THTR.DAN**  
**Degree: AA**  
**Fine and Performing Arts, Theatre Arts – Dance Option**

<b>First Semester</b>		
.....	Humanities Elective *	3
COM-100	Speech Communication	3
THR-110	Basic Acting Techniques	3
DAN-102	Ballet	2
.....	Mathematics/Computer Science Elective	3-4
WRT-101	English Composition I	3
<b>Total: 17-18</b>		
<b>Second Semester</b>		
.....	Humanities Elective *	3
MAT...	Mathematics Elective	3
.....	Social Science Elective	3
WRT-201	English Composition II	3
DAN...	Dance Technique	1
THR-113	Movement for the Performing Artists	2
THR-120	Stage Makeup	1
<b>Total: 16</b>		
<b>Third Semester</b>		
HIS...	History Elective	3
.....	Humanities Elective *	3
.....	Natural Science Elective	4
.....	Free Elective **	2
THR-124	Dance Experience	3
DAN...	Dance Technique	1
<b>Total: 16</b>		
<b>Fourth Semester</b>		
HIS...	History Elective	3
.....	Natural Science Elective	4
.....	Diversity Elective ■	3
.....	Social Science Elective	3
DAN...	Dance Technique	1
THR-216	Theatre Production Workshop	
	or	3-4
THR-215	Directing for the Stage	
<b>Total: 17-18</b>		

**Degree Total Credits: 64-66**

\* Recommended Humanities Electives – THR-101, MUS-110, THR-109, THR-140

\*\* Recommended COM-106, DFT-210, THR-236, WEX-...

■ **Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

**Code: AA.FPA.THTR.TECH**

**Degree: AA**

**Fine and Performing Arts, Theatre Arts – Technical Theatre Production Option**

<b>First Semester</b>		
.....	Humanities Elective *	3
COM-100	Speech Communication	3
THR-110	Basic Acting Techniques	3
THR-131	Introduction to Stagecraft and Lighting	3
WRT-101	English Composition I	3
<b>Total: 15</b>		
<b>Second Semester</b>		
.....	Humanities Elective *	3
MAT/CIS...	Mathematics/Computer Science Elective	3-4
.....	Social Science Elective	3
THR-120	Stage Makeup	1
THR-231	Stage Electrics	3
WRT-201	English Composition II	3
<b>Total: 16-17</b>		
<b>Third Semester</b>		
HIS...	History Elective	3
.....	Humanities Elective *	3
.....	Natural Science Elective	4
MAT...	Mathematics Elective	3
THR-217	Theatre Performance & Production	2
.....	Free Elective **	2
<b>Total: 17</b>		
<b>Fourth Semester</b>		
HIS...	History Elective	3
.....	Natural Science Elective	4
.....	Social Science Elective	3
.....	Diversity Elective ■	3
THR-216	Theatre Production Workshop or	3-4
THR-215	Directing for the Stage	
THR-232	Stage Management	1
<b>Total: 17-18</b>		

**Degree Total Credits: 65-67**

\* Recommended Humanities Electives – THR-101, MUS-110, THR-109, THR-140

\*\* Recommended – COM-106, DFT-210, THR-236, WEX-...

■ **Diversity Requirement:** In completing the BCC General Education Program, a student must take and pass at least one course in gender studies, non-Western history or thought, and/or cultural diversity. Choose from the following Humanities or Social Sciences electives: ANT-100; ANT-101; CIN-160; COM-114; GEO-101; GEO-102; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-223; LIT-224; LIT-228; PHR-106; HPR-121; PHR-122; PHR-124; PHR-125; PHR-126; PSY-110; PSY-123; PSY-207; PSY-210; SOC-222.

**A.S. DEGREE PROGRAM(S) IN NATURAL SCIENCES OR MATHEMATICS  
(Biology, Biotechnology, Chemistry, Computer Science, Mathematics, Physics)**

**Curriculum Requirements**

**Code:** AS.NSM.GEN

**Degree:** AS

**Program:** Natural Sciences or Mathematics

Associate in Science (A.S.) degree programs are designed to prepare students for transfer into bachelor's degree programs in four-year colleges and universities. The minimum requirement for graduation in such programs is 64 degree credits and completion of all courses and specific requirements listed within the student's chosen curriculum.

Bergen Community College offers a two-track program to students seeking to earn the Associate in Sciences (A.S.) degree:

- (1) Students may pursue the A.S. Degree with options in **Natural Sciences or Mathematics** by following a program of study in General Science, Biology, Biotechnology, Chemistry, Computer Science, Mathematics, or Physics.
- (2) Students may pursue the A.S. degree with options in **Professional Studies** by following a program of study in General Professional Studies, Broadcasting, Business Administration, Education, Exercise Science, Journalism, or Social Work.

**ASSOCIATE IN SCIENCE (A.S.) DEGREE OPTIONS IN NATURAL SCIENCES OR MATHEMATICS**

To earn the A.S. degree in Natural Sciences or Mathematics, a student must meet the following curriculum requirements:

Area of Study	Credits	Course Description
Communication	9	WRT-101 English Composition I (3 cr.) WRT-201 English Composition II (3 cr.) COM-100 Speech Communication (3 cr.)
Humanities	6	Two general education courses (6 cr.) to be selected from the following fields, with no more than one course (3 cr.) in any one field: Arts (Art [ART], Music [MUS], Theatre Arts [THR], Cinema Studies [CIN]) Literature (LIT) Philosophy and Religion (PHR) World Languages and Cultures (LAN)
Social Sciences	3	One general education course (3 cr.) to be selected from the following fields, with no more than one course (3 cr.) in any one field: Economics (ECO) Geography (GEO) Political Science (POL) Psychology (PSY) Sociology (SOC) and Anthropology (ANT)
Mathematics, Natural Sciences, and Technology	12*	One or two 4-cr. general education courses (4-8 cr.) in Mathematics (MAT) or Computer Science (CIS), one of which must be in Mathematics (MAT).  One or two 4-cr. general education courses (4-8 cr.) to be selected from the following fields: Biology (BIO) Chemistry (CHM) Physics (PHY)
Total GE Credits	30	
Restricted Program Requirements	22-24	
Program Support Requirements	9	Two general education courses (6 cr.) to be selected from the following fields, with no more than one course (3 cr.) in any one field: Arts (Art [ART], Music [MUS], Theatre Arts [THR], Cinema Studies [CIN]) Literature (LIT) Philosophy and Religion (PHR) World Languages and Cultures (LAN)  One general education course (3 cr.) to be selected from the following fields, with no more than one course (3 cr.) in any one field: Economics (ECO) Geography (GEO) Political Science (POL) Psychology (PSY) Sociology (SOC) and Anthropology (ANT)
Free Electives	3	Programs can make recommendations in footnotes.
Total Credits	64-66	

\*If a student takes 8 general education Foundation credits in Mathematics and Computer Science, then s/he must take 4 general education Foundation credits in Natural Sciences; and if s/he takes 8 general education Foundation credits in Natural Sciences, then s/he must take 4 general education Foundation credits in Mathematics. Combination of Mathematics, Computer Science, and Natural Sciences in the Foundation = 12 credits.

**Code: AS.NSM.GEN**  
**Degree: Associate in Science**  
**Natural Sciences or Mathematics, General Science Curriculum**

<b>First Semester</b>		
COM-100	Speech Communication	3
WEX-101	Dynamics of Health and Fitness	2
WRT-101	English Composition I	3
MAT/CIS...	Mathematics/Computer Science Elective *†	4
.....	Natural Science Elective *	4
<b>Total: 16</b>		
<b>Second Semester</b>		
.....	Humanities Elective (From at least three fields) *	3
MAT/CIS...	Mathematics/Computer Science Elective *†	4
.....	Natural Science Elective *	4
.....	Social Science Elective (Selected from two fields) *	3
WRT-201	English Composition II	3
<b>Total: 17</b>		
<b>Third Semester</b>		
WEX...	Dynamics of Health and Fitness Experience Elective	1
.....	Humanities Elective (From at least three fields) *	3
.....	Natural Science	
	and/or	8
MAT/CIS...	Mathematics/Computer Science Electives	
.....	Social Science Elective (Selected from two fields) *	3
<b>Total: 15</b>		
<b>Fourth Semester</b>		
.....	Humanities Electives (From at least three fields) *	6
.....	Natural Science	
	and/or	10-12
MAT/CIS...	Mathematics/Computer Science Electives	
<b>Total: 16-18</b>		
<b>Degree Total Credits: 64-66</b>		

\* General Education Elective

**Note:** It is recommended that students select their advanced courses in the areas of Biology, Chemistry, Computer Science, Mathematics, or Physics.

†MAT-280 Calculus I is required for all students in the AS Degree in Natural Sciences and Mathematics.

**Code: AS.NSM.BIO**  
**Degree: Associate in Science**  
**Natural Sciences or Mathematics, Biology Option**

<b>First Semester</b>		
BIO-101	General Biology I	4
CHM-140	General Chemistry I *	3
CHM-141	General Chemistry Laboratory I	1
MAT-180	Precalculus: College Algebra and Trigonometry	4
WRT-101	English Composition I	3
<b>Total: 15</b>		
<b>Second Semester</b>		
BIO-203	General Biology II	4
CHM-240	General Chemistry II	3
CHM-241	General Chemistry Laboratory II	1
MAT-150	Statistics I **	
	or	3-4
MAT-280	Calculus I	
WRT-201	English Composition II	3
.....	Humanities Elective ***	3
<b>Total: 17-18</b>		
<b>Third Semester</b>		
BIO-...	Biology Elective †	4
.....	General Education Elective	
	or	3
	Free Elective ‡	
.....	Humanities Electives ***	3
.....	Natural Science	
	or	4
	Mathematics/Computer Science Elective ***	
.....	Social Science Elective ***	3
<b>Total: 17</b>		
<b>Fourth Semester</b>		
.....	Biology Elective †	4
.....	Humanities Electives ***	6
COM-100	Speech Communication	3
.....	Social Science Elective ***	3
<b>Total: 16</b>		

**Degree Total Credits: 65-66**

\* If a student needs to complete *Introduction to Chemistry [CHM-100]* before registering for *General Chemistry I [CHM-140]*, CHM-100 can be used as the Natural Science Elective in the third semester.

\*\* Students can choose MAT-150 or MAT-268. Before selecting your statistics elective, check the requirements of the schools you are considering for transfer.

\*\*\*General Education Elective

†Students must choose among the following courses: BIO-201, BIO-202, BIO-225, BIO-227, BIO-228, or BIO-229

‡Students can choose WEX-101 [2 cr.] and a WEX experience course [1 cr.]: WEX-201, WEX-202, WEX-204, WEX-205, WEX-206, or WEX-208 to fulfill this elective for three credits.

**Code: AS.NSM.BIO.TECH**  
**Degree: Associate in Science**  
**Natural Sciences or Mathematics, Biotechnology Option**

<b>First Semester</b>		
BIO-101	General Biology I	4
CHM-140	General Chemistry I	3
CHM-141	General Chemistry Laboratory I	1
WRT-101	English Composition I	3
.....	Humanities Elective *	3
.....	Social Science Elective *	3
<b>Total: 17</b>		
<b>Second Semester</b>		
BIO-203	General Biology II	4
CHM-240	General Chemistry II	3
CHM-241	General Chemistry Laboratory II	1
MAT-150	Statistics I	3
WRT-201	English Composition II	3
.....	Humanities Elective *	3
<b>Total: 17</b>		
<b>Third Semester</b>		
BIO-210	Introduction to Biotechnology	4
MAT-180	Precalculus: College Algebra and Trigonometry	4
WEX-101	Dynamics of Health and Fitness	2
.....	Humanities Elective *	3
.....	Humanities Elective *	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
BIO-211	Introduction to Bioinformatics	3
COM-100	Speech Communication	3
MAT-280	Calculus I	4
WEX...	Dynamics of Health and Fitness Experience Elective	1
.....	Social Science Elective *	3
<b>Total: 14</b>		
<b>Degree Total Credits: 64</b>		

\* General Education Elective

**Code: AS.NSM.CHEM**  
**Degree: Associate in Science**  
**Natural Sciences or Mathematics, Chemistry Option**

<b>First Semester</b>		
CHM-140	General Chemistry I	3
CHM-141	General Chemistry Laboratory I	1
COM-100	Speech Communication	3
MAT-180	Precalculus: College Algebra and Trigonometry	4
WRT-101	English Composition I	3
.....	Humanities Elective *	3
<b>Total: 17</b>		
<b>Second Semester</b>		
CHM-240	General Chemistry II	3
CHM-241	General Chemistry Laboratory II	1
MAT-280	Calculus I	4
WRT-201	English Composition II	3
.....	Humanities Elective *	3
.....	Free Elective †	3
<b>Total: 17</b>		
<b>Third Semester</b>		
CHM-260	Organic Chemistry I	4
MAT-281	Calculus II	4
PHY-280	Physics I	4
.....	Social Sciences Elective *	3
<b>Total: 15</b>		
<b>Fourth Semester</b>		
CHM-262	Organic Chemistry II	4
PHY-290	Physics II	4
.....	Humanities Electives *	6
.....	Social Science Elective *	3
<b>Total: 17</b>		

**Degree Total Credits: 66**

\* General Education Elective

† Students can choose WEX-101 [2 cr.] and a WEX experience course [1 cr.]: WEX-201, WEX-202, WEX-204, WEX-205, WEX-206, or WEX-208 OR a General Education Elective

**Code: AS.NSM.COMP.SCI**  
**Degree: Associate in Science**  
**Natural Sciences or Mathematics, Computer Science Option**

<b>First Semester</b>		
CIS-165	Fundamentals of Programming	3
COM-100	Speech Communication	3
MAT-280	Calculus I	4
PHR-103	Basic Logic	3
WRT-101	English Composition I	3
<b>Total: 16</b>		
<b>Second Semester</b>		
CIS-265	Advanced Programming Concepts	3
CIS-271	Computer Organization and Assembly Language	3
MAT-281	Calculus II	4
WRT-201	English Composition II	3
.....	Humanities Elective *†	3
<b>Total: 16</b>		
<b>Third Semester</b>		
CIS-277	Data Structures and Algorithms	3
CIS-288	Discrete Mathematics for Computer Science	4
.....	Natural Sciences Elective **	4
.....	Humanities Elective *†	3
.....	Social Science Elective *±	3
<b>Total: 17</b>		
<b>Fourth Semester</b>		
MAT/CIS...	Mathematics/Computer Science Elective	3-4
.....	Free Elective †	3
.....	Natural Sciences Elective **	4
.....	Humanities Elective *†	3
.....	Social Science Elective *±	3
<b>Total: 16-17</b>		

**Degree Total Credits: 65-66**

\* General Education Elective

\*\* Recommended: PHY-280 Physics I and PHY-290 Physics II or CHM-140 General Chemistry I and CHM-141 General Chemistry Lab I and CHM-240 General Chemistry II and CHM-241 General Chemistry Lab II

† Recommended: PHR-203 Intermediate Logic

± Recommended: ECO-101 Microeconomics or PSY-101 General Psychology

† One of the following is recommended: CIS-289, CIS-287, MAT-282, MAT-286, PHY-291

**Code: AS.NSM.MATH**  
**Degree: Associate in Science**  
**Natural Sciences or Mathematics, Mathematics Option**

<b>First Semester</b>		
COM-100	Speech Communication	3
MAT-280	Calculus I	4
PHR-103	Basic Logic	3
WRT-101	English Composition I	3
.....	Natural Science Elective *†	4
<b>Total: 17</b>		

<b>Second Semester</b>		
ECO-101	Macroeconomics	3
MAT-281	Calculus II	4
WRT-201	English Composition II	3
.....	Humanities Elective *	3
.....	Natural Science Elective *†	4
<b>Total: 17</b>		

<b>Third Semester</b>		
MAT-282	Calculus III	4
MAT-286	Linear Algebra	4
.....	Humanities Elective *	3
MAT...	Mathematics or Natural Sciences Elective ±	3-4
<b>Total: 14-15</b>		

<b>Fourth Semester</b>		
.....	Free Elective	3
MAT-283	Differential Equations	4
.....	Humanities Elective †	3
.....	Social Science Elective *	3
MAT...	Mathematics or Natural Sciences Elective ±	3-4
<b>Total: 16-17</b>		

**Degree Total Credits: 64-66**

\* General Education Elective

† The student must complete one of the following 8-credit sequences: CHM-140/141 and CHM-240/241, or PHY-186 and PHY-286, or PHY-280 and PHY-290

± The student must choose from among the following courses: MAT-155, MAT-250, MAT-268, MAT-285, CHM-140/141, CHM-240/241, PHY-186, PHY-280, PHY-286, PHY-290, PHY-291

† One general education course to be selected from the following fields: Arts [ART, MUS, THR, CIN]; Theatre Arts [THR, CIN]; History [HIS]; Literature [LIT]; World Languages and Cultures [LAN]

**Code: AS.NSM.PHYSC**  
**Degree: Associate in Science**  
**Natural Sciences or Mathematics, Physics Option**

		<b>First Semester</b>	
MAT-280	Calculus I		4
PHY-280	Physics I		4
COM-100	Speech Communication		3
WRT-101	English Composition I		3
.....	Social Science Elective *		3
		<b>Total: 17</b>	
		<b>Second Semester</b>	
MAT-281	Calculus II		4
PHY-290	Physics II		4
WRT-201	English Composition II		3
.....	Humanities Elective *		3
.....	Free Elective **		3
		<b>Total: 17</b>	
		<b>Third Semester</b>	
MAT-282	Calculus III		4
PHY-291	Physics III		4
.....	Humanities Elective *		3
.....	Natural Sciences Elective ***		4
		<b>Total: 15</b>	
		<b>Fourth Semester</b>	
PHY-294	Engineering Mechanics		4
.....	Humanities Electives *		6
.....	Natural Science Elective ***		4
.....	Social Science Elective *		3
		<b>Total: 17</b>	

**Degree Total Credits: 66**

\* General Education Elective

\*\*CIS-270 Programming for Scientific Applications is strongly recommended; or WEX-101 Dynamics of Health and Fitness [2 cr.], plus a WEX experience course [1 cr.]

\*\*\* CHM-140/141 General Chemistry I and CHM-240/241 General Chemistry II are recommended

**AS DEGREE IN ENGINEERING SCIENCE**

**Curriculum Requirements**

<b>Code:</b> AS.ENGIN.SCI <b>Degree:</b> AS <b>Program:</b> Engineering Science  ASSOCIATE IN SCIENCE (A.S.) DEGREE IN ENGINEERING SCIENCE To earn the A.S. Degree in Engineering Science, a student must meet the following curriculum requirements:		
<b>Area of Study</b>	<b>Credits</b>	<b>Course Description</b>
Communication	9	WRT-101 English Composition I (3 cr.) WRT-201 English Composition II (3 cr.) COM-100 Speech Communication (3 cr.)
Humanities	6	Two general education courses (6 cr.) to be selected from the following fields, with no more than one course (3 cr.) in any one field: Arts (Art [ART], Music [MUS], Theatre Arts [THR], Cinema Studies [CIN]) Literature (LIT) Philosophy and Religion (PHR) World Languages and Cultures (LAN)
Social Sciences	3	One general education course (3 cr.) to be selected from the following fields: Economics (ECO) Geography (GEO) Political Science (POL) Psychology (PSY) Sociology (SOC) and Anthropology (ANT)
Mathematics and Natural Sciences	12*	One or two 4-cr. general education courses (4-8 cr.) in Mathematics (MAT)  One or two general education courses (4-8 cr.) to be selected from the following fields: Biology (BIO) Chemistry (CHM) Physics (PHY)
Total GE Credits	30	
Restricted Program Requirements	33	
Free Electives	3	Program can make recommendations in footnotes.
Total Credits	66	

\*If a student takes 8 general education Foundation credits in MAT, then s/he must take 4 general education Foundation credits in Natural Sciences; and if s/he takes 8 general education Foundation credits in Natural Sciences, then s/he must take 4 general education Foundation credits in MAT. Combination of MAT and Natural Sciences in the Foundation = 12 credits.

**Code: AS.ENGIN.SCI**  
**Degree: Associate in Science**  
**Engineering Science**

<b>First Semester</b>		
CHM-140	General Chemistry I	3
CHM-141	General Chemistry Laboratory I	1
COM-100	Speech Communication	3
DFT-107	Drafting I	2
MAT-280	Calculus I	4
PHY-280	Physics I	4
<b>Total: 17</b>		
<b>Second Semester</b>		
CHM-240	General Chemistry II	3
CHM-241	General Chemistry Laboratory II	1
CIS-270	Programming for Scientific Applications	3
MAT-281	Calculus II	4
PHY-290	Physics II	4
<b>Total: 15</b>		
<b>Third Semester</b>		
MAT-282	Calculus III	4
PHY-291	Physics III	4
WRT-101	English Composition I	3
.....	Humanities Elective *	3
.....	Social Science Elective *†	3
<b>Total: 17</b>		
<b>Fourth Semester</b>		
MAT-283	Differential Equations	4
PHY-294	Engineering Mechanics	4
WRT-201	English Composition II	3
.....	Humanities Elective *	3
.....	Free Elective ±	3
<b>Total: 17</b>		

**Degree Total Credits: 66**

\*General Education Elective

†Recommended ECO-101 Macroeconomics

±Recommended ECO-201 Microeconomics

**AS DEGREE PROGRAM(S) IN PROFESSIONAL STUDIES**

**Curriculum Requirements**

<p><b>Code:</b> AS.PS.GEN  <b>Degree:</b> AS  <b>Program:</b> Professional Studies</p> <p>This curriculum is intended for students who have accumulated college credits that are not applicable in other BCC degree programs. The curriculum is not intended for students who are at the beginning of their college careers. Admission to this curriculum is limited to students who have earned a minimum of 45 college credits.</p> <p>ASSOCIATE IN SCIENCE (A.S.) DEGREE IN PROFESSIONAL STUDIES          To earn the A.S. Degree with an Option in Professional Studies, a student must meet the following curriculum requirements:</p>		
Area of Study	Credits	Course Description
Communication	9	WRT-101 English Composition I (3 cr.) WRT-201 English Composition II (3 cr.) COM-100 Speech Communication (3 cr.)
Humanities	6	Two general education courses (6 cr.) to be selected from the following fields, with no more than one course (3 cr.) in any one field: Arts (Art [ART], Music [MUS], Theatre Arts [THR], Cinema Studies [CIN]) Literature (LIT) Philosophy and Religion (PHR) World Languages and Cultures (LAN)
Social Sciences	3	One general education course (3 cr.) to be selected from the following fields: Economics (ECO) Geography (GEO) Political Science (POL) Psychology (PSY) Sociology (SOC) and Anthropology (ANT)
Mathematics and Natural Sciences	11-12	One 3-cr. or 4-cr. general education courses in Mathematics (MAT)  Two general education courses (8 cr.) to be selected from the following fields: Biology (BIO) Chemistry (CHM) Physics (PHY)
GE Elective	0-3	If needed to reach the Foundation minimum of 30-32 credits, select one course from the BCC general education course list. If not needed for that purpose, then 3-credit Free Elective.
Total GE Credits	30-32	
AS/PS Program Support Requirements in Humanities and Social Sciences	12	Three general education courses (9 cr.) to be selected from the following fields, with noo more than two courses (6 cr.) in any one field: Arts (Art [ART], Music [MUS], Theatre Arts [THR], Cinema Studies [CIN]) Literature (LIT) Philosophy and Religion (PHR) World Languages and Cultures (LAN)  One general education course (3 cr.) to be selected from the following fields: Economics (ECO) Geography (GEO) Political Science (POL) Psychology (PSY) Sociology (SOC) and Anthropology (ANT)
AS/PS Program Requirements	15-18	
Free Electives	3-6	Program can make recommendations in footnotes.
Total Credits	64-66	

**Code: AS.PS.GEN**  
**Degree: AS**  
**Professional Studies, General Curriculum**

		<b>First Semester</b>	
MAT...	Mathematics Elective *		3-4
COM-100	Speech Communication		3
WRT-101	English Composition I		3
.....	Humanities Elective *		3
.....	Additional Program Credits		3
		<b>Total: 15-16</b>	
		<b>Second Semester</b>	
WRT-201	English Composition II		3
.....	Social Science Elective *		3
.....	General Education Elective *		
	or		3
.....	Free Elective		
.....	Humanities Elective *		3
.....	Additional Program Credits		3
		<b>Total: 15</b>	
		<b>Third Semester</b>	
.....	Natural Science Elective *		4
.....	Social Science Elective *		3
.....	Humanities Elective *		3
.....	Additional Program Credits		6
		<b>Total: 16</b>	
		<b>Fourth Semester</b>	
.....	Free Elective **		3
.....	Natural Science Elective *		4
.....	Humanities Electives *		6
.....	Additional Program Credits		3-6
		<b>Total: 16-19</b>	
<b>Degree Total Credits: 62-68</b>			

\* General Education Elective

\*\* Recommended: Cornerstone/Capstone/Success course or one associated with the Professional Studies Program Concentration

**Code: AS.PS.BRCAST**  
**Degree: AS**  
**Professional Studies, Broadcasting Option**

<b>First Semester</b>		
MAT...	Mathematics Elective *	3-4
COM-100	Speech Communication	3
COM-101	Mass Media of Communication	3
WRT-101	English Composition I	3
.....	Humanities Elective *	3
<b>Total: 15-16</b>		
<b>Second Semester</b>		
COM-103	Introduction to Radio/Television Broadcasting	3
WRT-201	English Composition II	3
.....	Social Science Elective *	3
.....	Humanities Electives *	3
.....	General Education Elective *	
	or	3
.....	Free Elective	
<b>Total: 15</b>		
<b>Third Semester</b>		
COM-105	Radio Production	3
COM-106	TV Production	3
.....	Humanities Elective *	3
.....	Natural Science Elective *	4
.....	Social Science Elective *	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
COM-205	Advanced Radio Production	
	or	3
COM-208	Directing for TV	
COM-207	TV Production II	
	or	3
COM-111	Video Post Production	
.....	Humanities Electives *	6
.....	Natural Science Elective *	4
.....	Free Elective **	1-3
<b>Total: 16-19</b>		
<b>Degree Total Credits: 62-66</b>		

\* General Education Elective

\*\*Recommended: Cornerstone/Capstone/Success course

**Code: AS.PS.BUS.ACCT**  
**Degree: AS**  
**Professional Studies, Business Administration - Accounting Option**

<b>First Semester</b>		
BUS-101	Introduction to Business	3
COM-100	Speech Communication	3
ECO-101	Macroeconomics	3
WRT-101	English Composition I	3
MAT...	Mathematics Elective **	3-4
<b>Total: 15-16</b>		
<b>Second Semester</b>		
ACC-110	Financial Accounting	3
BUS-201	Marketing Principles	3
ECO-201	Microeconomics	3
WRT-201	English Composition II	3
.....	Humanities Electives *	6
<b>Total: 18</b>		
<b>Third Semester</b>		
ACC-210	Managerial Accounting	3
.....	Humanities Elective *	3
.....	Natural Science Elective *	4
.....	Business Elective ***	3
.....	Humanities Elective *	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
.....	General Education *	
	or	3
.....	Free Elective	
ACC-202	Intermediate Accounting I	3
.....	Humanities Elective *	3
.....	Free Elective †	3
.....	Natural Science Elective *	4
<b>Total: 16</b>		
<b>Degree Total Credits: 65-66</b>		

\* General Education Elective

\*\* General Education Elective in Mathematics – before selecting your Mathematics elective, check the requirements of the schools you are considering for transfer. If you are uncertain about where you plan to transfer, the following courses are transferable to business programs at a number of local colleges: MAT-150, MAT-155, MAT-180, MAT-223 and MAT-268

\*\*\* BUS-207 or INF-101

† Students can choose WEX-101 [2 cr.] and a WEX experience course [1 cr.]: WEX-201, WEX-204, WEX-205, WEX-206, or WEX-208 to fulfill this 3-credit elective

**Code: AS.PS.BUS.ADM**  
**Degree: AS**  
**Professional Studies, Business Administration**

<b>First Semester</b>		
ACC-110	Financial Accounting	3
BUS-101	Introduction to Business	3
COM-100	Speech Communication	3
WRT-101	English Composition I	3
MAT...	Mathematics Elective **	3-4

**Total: 15-16**

<b>Second Semester</b>		
ACC-210	Managerial Accounting	3
ECO-101	Macroeconomics	3
WRT-201	English Composition II	3
.....	Humanities Electives *	6
.....	Business Elective ***	3

**Total: 18**

<b>Third Semester</b>		
ECO-201	Microeconomics	
	or	
PSY-101	General Psychology	3
	or	
SOC-101	Sociology	
.....	Business Elective ***	3
.....	Humanities Electives *	6
.....	Natural Science Elective *	4

**Total: 16**

<b>Fourth Semester</b>		
.....	General Education Elective *	
	or	3
	Free Elective †	
.....	Free Elective ±	3
.....	Humanities Elective *	3
.....	Natural Science Elective *	4
.....	Business Elective ***	3

**Total: 16**

**Degree Total Credits: 65-66**

\* General Education Elective

\*\* General Education Elective in Mathematics – before selecting your Mathematics electives, check the requirements of the schools you are considering for transfer. If you are uncertain about where you plan to transfer, the following courses are transferable to business programs at a number of local colleges: MAT-150, MAT-155, MAT-180, MAT-223, or MAT-268

\*\*\* Any BUS, or INF-101, or BNF-201 - before selecting your Business electives, check the requirements of the schools you are considering for transfer. If you are uncertain about where you plan to transfer, the following courses are transferable to business programs at a number of local colleges: BUS-201, BUS-207, BUS-233, BUS-234, or INF-101

† Recommended: BUS-463 Co-Op Work Experience [Business Administration]

±Students can choose WEX-101 [2 cr.] and a WEX experience course [1 cr.]: WEX-201, WEX-204, WEX-205, WEX-206, or WEX-208 to fulfill this 3-credit elective

**Code: AS.PS.BUS.HOSP**  
**Degree: AS**  
**Professional Studies, Business Administration - Hospitality Option**

<b>First Semester</b>		
ACC-110	Financial Accounting	3
BUS-101	Introduction to Business	3
HRM-101	Introduction to Hospitality Management	3
WRT-101	English Composition I	3
MAT...	Mathematics Electives *	3-4
<b>Total: 15-16</b>		
<b>Second Semester</b>		
ACC-210	Managerial Accounting	3
COM-100	Speech Communication	3
ECO-101	Macroeconomics	3
WRT-201	English Composition II	3
.....	Humanities Elective **	6
<b>Total: 18</b>		
<b>Third Semester</b>		
ECO-201	Microeconomics	
	or	
PSY-101	General Psychology	3
	or	
SOC-101	Sociology	3
.....	Humanities Elective **	6
.....	Hotel/Restaurant/Hospitality Elective ***	3
.....	Natural Science Elective **	4
<b>Total: 16</b>		
<b>Fourth Semester</b>		
.....	Business Elective †	3
.....	Natural Science Elective **	4
.....	Free Elective	3
.....	Humanities Elective **	3
.....	General Education Elective **	
	or	3
.....	Free Elective ‡	
<b>Total: 16</b>		

**Degree Total Credits: 65-66**

\* Before selecting your mathematics elective, check the requirements of the schools you are considering for transfer. If you are uncertain about where you plan to transfer, the following courses are transferable to business programs at a number of local colleges: MAT-150, MAT-155, MAT-180, MAT-223

\*\* Recommended: 6-credits of Literature, 3-credits of Philosophy, and 6-credits of one World Language

\*\*\* HRM-104, ACC-206, or HRM/LGL-219

† BUS-201, BUS-207, or BUS/HRM-129

‡ Recommended: INF-101

**Code: AS.PS.BUS.INTL**

**Degree: AS**

**Professional Studies, Business Administration - International Trade Option**

**First Semester**

ACC-110	Financial Accounting	3
BUS-101	Introduction to Business	3
COM-100	Speech Communication	3
WRT-101	English Composition I	3
MAT...	Mathematics Elective **	3-4

**Total: 15-16**

**Second Semester**

ACC-210	Managerial Accounting	3
BUS-262	Fundamentals of International Business	3
ECO-101	Macroeconomics	3
WRT-201	English Composition II	3
.....	Humanities Electives *	6

**Total: 18**

**Third Semester**

ECO-201	Microeconomics	
	or	
PSY-101	General Psychology	3
	or	
SOC-101	Sociology	3
.....	Business International Trade Elective ***	3
.....	Humanities Electives *	6
.....	Natural Science Elective *	4

**Total: 16**

**Fourth Semester**

.....	General Education Elective *	
	or	3
.....	Free Elective †	
.....	Free Elective ±	3
.....	Humanities Elective *	3
.....	Natural Science Elective *	4
.....	Business Elective ****	3

**Total: 16**

**Degree Total Credits: 65-66**

\*General Education Elective [students considering a career in International Trade are strongly encouraged to take a 6-credit World Language sequence in Humanities]

\*\* General Education Elective in Mathematics – before selecting your Mathematics electives, check the requirements of the schools you are considering for transfer. If you are uncertain about where you plan to transfer, the following courses are transferable to business programs at a number of local colleges: MAT-150, MAT-155, MAT-180, MAT-223, or MAT-268

\*\*\* Students should select one of the following: BUS-202, BUS-263, or BNF-208

\*\*\*\* Recommended - one of the following: BUS-201, BUS-207, or INF-101

† Recommended: BUS-463 Co-Op Work Experience [Business Administration] with an International Trade position

± Students can choose WEX-101 [2 cr.] and a WEX experience course [1 cr.]: WEX-201, WEX-204, WEX-205, WEX-206, or WEX-208 to fulfill this 3-credit elective

**Code: AS.PS.BUS.MGMT**  
**Degree: AS**  
**Professional Studies, Business Administration - Management Option**

<b>First Semester</b>		
ACC-110	Financial Accounting	3
BUS-101	Introduction to Business	3
COM-100	Speech Communication	3
WRT-101	English Composition I	3
MAT...	Mathematics Elective **	3-4
<b>Total: 15-16</b>		
<b>Second Semester</b>		
ACC-210	Managerial Accounting	3
BUS-207	Principles of Management	3
ECO-101	Macroeconomics	3
WRT-201	English Composition II	3
.....	Humanities Electives *	6
<b>Total: 18</b>		
<b>Third Semester</b>		
ECO-201	Microeconomics	
	or	
PSY-101	General Psychology	3
	or	
SOC-101	Sociology	
.....	Business Elective ***	3
.....	Humanities Electives *	6
.....	Natural Science Elective *	4
<b>Total: 16</b>		
<b>Fourth Semester</b>		
.....	Free Elective ±	3
.....	Humanities Elective *	3
.....	Natural Science Elective *	4
.....	Business Elective ***	3
.....	General Education Elective *	
	or	3
.....	Free Elective †	
<b>Total: 16</b>		

**Degree Total Credits: 65-66**

\* General Education Elective

\*\* General Education Elective in Mathematics – before selecting your Mathematics elective, check the requirements of the schools you are considering for transfer. If you are uncertain about where you plan to transfer, the following courses are transferable to business programs at a number of local colleges: MAT-150, MAT-155, MAT-180, MAT-223, and MAT-268

\*\*\*Students should take one of the following: BUS-170, BUS-201, BUS-205, BUS-208, BUS-209, BUS-233, BUS-234, BNF-201, or INF-101

† Recommended: BUS-463 Co-Op Work Experience [Business Administration] with managerial position

± Students can choose WEX-101 [2 cr.] and a WEX experience course [1 cr.]: WEX-201, WEX-204, WEX-205, WEX-206, or WEX-208 to fulfill this credit elective

**Code: AS.PS.BUS.MKTG**  
**Degree: AS**  
**Professional Studies, Business Administration - Marketing Option**

<b>First Semester</b>		
ACC-110	Financial Accounting	3
BUS-101	Introduction to Business	3
COM-100	Speech Communication	3
WRT-101	English Composition I	3
MAT...	Mathematics Elective **	3-4
<b>Total: 15-16</b>		
<b>Second Semester</b>		
ACC-210	Managerial Accounting	3
BUS-201	Marketing Principles	3
ECO-101	Macroeconomics	3
WRT-201	English Composition II	3
.....	Humanities Electives *	6
<b>Total: 18</b>		
<b>Third Semester</b>		
ECO-201	Microeconomics	
	or	
PSY-101	General Psychology	3
	or	
SOC-101	Sociology	
BUS...	Business Marketing Elective ***	3
.....	Humanities Electives *	6
.....	Natural Science Elective *	4
<b>Total: 16</b>		
<b>Fourth Semester</b>		
.....	Business Elective ****	3
.....	Free Elective †	3
.....	Humanities Elective *	3
.....	Natural Sciences Elective *	4
.....	General Education Elective *	
	or	
.....	Free Elective ±	3
<b>Total: 16</b>		

**Degree Total Credits: 65-66**

\* General Education Elective

\*\* General Education Elective in Mathematics – before selecting your Mathematics elective, check the requirements of the schools you are considering for transfer. If you are uncertain about where you plan to transfer, the following courses are transferable to business programs at a number of local colleges: MAT-150, MAT-155, MAT-180, MAT-223, and MAT-268

\*\*\* Students should take one of the following: BUS-203, BUS-210, or BUS-250

\*\*\*\* Students should take one of the following: BUS-207, BUS-233, BUS-271, or INF-101

† Students can choose WEX-101 [2 cr.] and a WEX experience course [1 cr.]: WEX-201, WEX-204, WEX-205, WEX-206, or WEX-208 to fulfill this 3-credit elective

± Recommended: BUS-463 Co-Op Work Experience [Business Administration] with a marketing position

**Code: AS.PS.BUS.NONPRF.MGT**

**Degree: AS**

**Professional Studies, Business Administration - Nonprofit Management Option**

<b>First Semester</b>		
ACC-110	Financial Accounting	3
BUS-115	Introduction to Nonprofit Organizations	3
COM-100	Speech Communication	3
ECO-101	Macroeconomics	3
WRT-101	English Composition I	3
<b>Total: 15</b>		

<b>Second Semester</b>		
MAT...	Mathematics Elective **	3-4
ACC-210	Managerial Accounting	3
ECO-201	Microeconomics	
	or	3
PSY-101	General Psychology	
WRT-201	English Composition II	3
.....	Nonprofit Course Elective ***	3
.....	Humanities Elective*	3
<b>Total: 18-19</b>		

<b>Third Semester</b>		
.....	Business Administrative Elective †	3
.....	Natural Science Elective *	4
.....	Humanities Electives *	9
<b>Total: 16</b>		

<b>Fourth Semester</b>		
.....	Business Administrative Elective †	3
.....	Natural Science Elective *	4
.....	Free Elective ±	3
.....	Humanities Elective *	3
.....	General Education Elective *	
	or	3
.....	Free Elective ◆	
<b>Total: 16</b>		

**Degree Total Credits: 65-66**

\* General Education Elective

\*\* General Education Elective in Mathematics – before selecting your Mathematics electives, check the requirements of the schools you are considering for transfer. If you are uncertain about where you plan to transfer, the following courses are transferable to business programs at a number of local colleges: MAT-150, MAT-155, MAT-180, MAT-223

\*\*\* Select from: BUS-116, LGL-209, ACC-115, CRJ-113, LIT-220, POL-101, or SOC-102

† Select from: BUS-129, BUS-201, BUS-207, or BUS-208

± Recommended: INF-101 or SOC-113

◆ Recommended: General Education Course or Co-Op in vocational area of interest

**Code: AS.PS.CRIMJ**  
**Degree: AS**  
**Professional Studies, Criminal Justice Option**

<b>First Semester</b>		
CRJ-101	Introduction to Criminal Justice	3
CRJ-113	The Juvenile Justice Process	3
WEX-101	Dynamics of Health and Fitness	2
WRT-101	English Composition I	3
.....	Humanities Elective **	3
.....	Social Science Elective ***	3
<b>Total: 17</b>		
<b>Second Semester</b>		
CRJ-109	Contemporary Issues in Policing	3
WRT-201	English Composition II	3
.....	Humanities Elective *	3
.....	Humanities Elective **	3
.....	Social Science Elective ***	3
WEX...	Dynamics of Health and Fitness Experience **	1
<b>Total: 16</b>		
<b>Third Semester</b>		
COM-100	Speech Communication	3
CRJ-105	Police Administration	3
.....	Humanities Elective **	3
.....	Natural Science Elective *	4
.....	Math/Computer Science Elective *	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
CRJ-103	Criminal Law	3
CRJ-107	Criminology	3
.....	Natural Science Elective *	4
.....	Math/Computer Science Elective *	3
.....	Humanities Elective **	3
<b>Total: 16</b>		
<b>Degree Total Credits: 65</b>		

\* General Education Elective

\*\* Highly recommended: HIS-111, HIS-112, PHR-103

\*\*\* Highly recommended: SOC-101, PSY-101

**Code: AS.PS.EDUC**  
**Degree: AS**  
**Professional Studies, Education Option**

<b>First Semester</b>		
COM-100	Speech Communication	3
EDU-101	Introduction to Education	3
WEX-101	Dynamics of Health and Fitness	2
WRT-101	English Composition I	3
MAT/CIS...	Mathematics/Computer Science Elective *	3
.....	Social Science Elective *†	3
<b>Total: 17</b>		
<b>Second Semester</b>		
SOC-102	Introduction to Human Services	3
WRT-201	English Composition II	3
MAT/CIS...	Mathematics/Computer Science Elective *	3
.....	Humanities Electives *	6
<b>Total: 15</b>		
<b>Third Semester</b>		
EDU-103	Principles and Practices in Education	3
PSY-103	Educational Psychology	3
WEX...	Dynamics of Health and Fitness Experience *	1
.....	Humanities Elective *	3
.....	Natural Science Elective *	4
.....	Social Science Elective *‡	3
<b>Total: 17</b>		
<b>Fourth Semester</b>		
SOC-103	Sociology of the Family	3
.....	Free Electives	3
.....	Humanities Electives *	6
.....	Natural Science Elective *	4
<b>Total: 16</b>		

**Degree Total Credits: 65**

\* General Education Elective

† General Psychology is recommended

‡ SOC-101 Sociology is recommended

**Code: AS.PS.EXER**  
**Degree: AS**  
**Professional Studies, Exercise Science Option**

<b>First Semester</b>		
WEX-159	Cardiopulmonary Resuscitation and Emergency First Aid	3
WEX-164	Exercise Science	3
WRT-101	English Composition I	3
MAT...	Mathematics Elective *	3-4
.....	Humanities Elective *	3
<b>Total: 15-16</b>		
<b>Second Semester</b>		
COM-100	Speech Communication	3
WEX-182	Fitness Measurement	3
WEX-184	Sports Medicine I - Theory and Practice	3
WRT-201	English Composition II	3
.....	Social Science Elective *	3
.....	General Education Elective *	3
<b>Total: 18</b>		
<b>Third Semester</b>		
.....	Humanities Electives *	6
.....	Natural Science Elective *	4
.....	Social Science Elective *	3
WEX-106	Nutrition for Exercise and Fitness	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
.....	Humanities Electives *	6
.....	Natural Science Elective *	4
.....	Free Elective **	3
WEX-183	Programs and Principles of Conditioning	3
<b>Total: 16</b>		

**Degree Total Credits: 65-66**

\* General Education Elective

\*\* Recommended: Cornerstone/Capstone/Success course or one recommended by the program concentration [may include WEX-101 and WEX-200 level courses.]

**Code: AS.PS.INFO**

**Degree: AS**

**Professional Studies, Information Technology**

<b>First Semester</b>		
COM-100	Speech Communication	3
INF-101	Introduction to Information Technology	3
WRT-101	English Composition I	3
MAT...	Mathematics Elective *†	3
INF...	Programming Language Fundamentals **	3

**Total: 15**

<b>Second Semester</b>		
BUS-101	Introduction to Business	3
WEX-101	Dynamics of Health and Fitness	2
WRT-201	English Composition II	3
MAT...	Mathematics Elective *†	3
.....	Humanities Elective *	3
INF...	Advanced Programming Languages ***‡	3

**Total: 17**

<b>Third Semester</b>		
.....	Natural Science Elective *	4
.....	Social Science Elective *F	3
.....	Humanities Electives *	6
WEX...	Wellness and Exercise Elective *	1
INF...	Restricted INF Elective ❖	3

**Total: 17**

<b>Fourth Semester</b>		
.....	Humanities Electives *	6
.....	Social Sciences Elective *	3
.....	Natural Sciences Elective *	4
INF-208	Systems Analysis and Design	3

**Total: 16**

**Degree Total Credits: 65**

\* General Education Elective

\*\* Programming Language Electives Fundamentals [Part 1 of a continuing sequence]:

Select from INF-145, INF-152, INF-153

\*\*\* Programming Language Electives Advanced [Part 2 of a continuing sequence]: Select from INF-224, INF-246, INF-268

❖ INF Restricted Electives [courses cannot duplicate as Restricted Electives when selected as Programming Electives]:

Select from INF-145, INF-152, INF-153, INF-160, INF-217

† Recommended Mathematics Elective [choose two of the following]: MAT-180, MAT-223, MAT-280

‡ Class offered only during spring semester

F Recommended: ECO-101 Macroeconomics

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AS.PS.JOUR**  
**Degree: AS**  
**Professional Studies, Journalism Option**

<b>First Semester</b>		
COM-100	Speech Communication	3
COM-101	Mass Media of Communication	3
WRT-101	English Composition I	3
MAT...	Mathematics Elective *	3-4
.....	Humanities Elective *	3
<b>Total: 15-16</b>		
<b>Second Semester</b>		
COM-201	Introduction to Journalism	3
WRT-201	English Composition II	3
.....	Social Science Elective *	3
.....	General Education Elective *	
	or	3
.....	Free Elective	
.....	Humanities Electives *	3
<b>Total: 15</b>		
<b>Third Semester</b>		
COM-110	Print Journalism Production	3
COM-206	Writing for the Mass Media	3
.....	Humanities Elective *	3
.....	Natural Science Elective *	4
.....	Social Science Elective *	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
COM-210	Public Relations	3
COM-471	Co-Op Work Experience (Journalism)	1
INF-115	Desktop Publishing	
	or	1
INF-161	Internet Research Data Handling	
.....	Humanities Electives *	6
.....	Natural Science Elective *	4
.....	Free Elective **	2-4
<b>Total: 17-18</b>		

**Degree Total Credits: 63-65**

\* General Education Elective

\*\*Recommended: Cornerstone/Capstone/Success course

**Code: AS.PS.LABOR**  
**Degree: AS**  
**Professional Studies, Labor Studies Option**

**First Semester**

COM-100	Speech Communication	3
WRT-101	English Composition I	3
.....	Humanities Elective *	3
.....	Social Science Elective *	3
.....	Mathematics **	3-4

**Total: 15-16**

**Second Semester**

BUS-101	Introduction to Business ***	
	or	3
BUS-115	Introduction to Nonprofit Organizations ***	
ECO-105	Labor Economics	3
WRT-201	English Composition II	3
.....	Natural Science Elective *	4
HIS...	Restricted History †	3

**Total: 16**

**Third Semester**

BUS-208	Human Resources Management	3
PHR-111	Social and Political Philosophy	3
POL-116	Labor Law	3
.....	Natural Science Elective *	4
.....	Restricted History †	3

**Total: 16**

**Fourth Semester**

LGL-236	Employment Law ◆	2
POL-104	State and Local Government	3
POL-122	Collective Bargaining	3
PSY-109	Industrial Psychology	3
.....	Humanities Elective *	3
.....	General Elective [if necessary]*	3

**Total: 17**

**Degree Total Credits: 64-65**

\* General Education Elective

\*\* Choose a 3 or 4 credit course from General Education - MAT-223 is recommended for students who wish to pursue degrees after they transfer in Business, and Human Resources and Employment Relations Management. The sequence of MAT-150 and MAT-250 is recommended for students who wish to pursue degrees after they transfer in research areas of the social sciences.

\*\*\* BUS-101 or BUS-115 must be taken instead of a free elective to satisfy the prerequisite for BUS-208. If a student does not complete BUS-101 or BUS-115 as a free elective, then this prerequisite may be waived by special permission from the Academic Department Chair of the Business Department.

† Choose a General Education History course from the following: HIS-112, HIS-113, HIS-114, HIS-116

◆ LGL-101 prerequisite for LGL-236 - if a student does not complete LGL-101 as a free elective, then this prerequisite may be waived by special permission from the Academic Department Chair of Legal and Related Studies

**Code: AS.PS.MUSC.BUS**  
**Degree: AS**  
**Professional Studies, Music Business Option**

<b>First Semester</b>		
MUS-131	Class Piano I	2
MUA-1..	Applied Music I	1
MUS-1..	Performance Ensemble I	1
MUS-163	Careers in Music	3
WRT-101	English Composition I	3
COM-100	Speech Communication	3
.....	Humanities Elective*	3
<b>Total: 16</b>		
<b>Second Semester</b>		
MUS-231	Class Piano II	2
MUA-2..	Applied Music II	1
MUS-152	Introduction to the Music Business	3
WRT-201	English Composition II	3
MAT...	Mathematics Elective *	3-4
.....	Humanities Elective *	3
<b>Total: 15-16</b>		
<b>Third Semester</b>		
MUS-132	Music Theory I	2
MUS-134	Ear Training and Musicianship I	2
MUS-252	Music in the Marketplace	3
MUS...	Music Elective *	3
ECO-101	Macroeconomics	3
.....	Natural Science Elective *	4
<b>Total: 17</b>		
<b>Fourth Semester</b>		
MUS-232	Music Theory II	2
MUS-234	Ear Training and Musicianship II	2
MUS-262	Concert Promotion and Production	3
MUS-2..	Performance Ensemble II	1
.....	Natural Science Elective *	4
.....	General Education Elective *	3
<b>Total: 15</b>		
<b>Degree Total Credits: 63-64</b>		

\*General Education Elective

**Code: AS.PS.MUSC.TECH**  
**Degree: AS**  
**Professional Studies, Music Technology Option**

**First Semester**

MUS-151	Introduction to Digital Audio Recording	3
MUA-131	Class Piano I	2
MUS-1..	Applied Music I	1
WRT-101	English Composition I	3
COM-100	Speech Communication	3
PHY-185	Introduction to Physics	4

**Total: 16**

**Second Semester**

MUS-231	Class Piano II	2
MUA-2..	Applied Music II	1
MUS -132	Music Theory I	2
MUS-134	Ear Training and Musicianship I	2
MUS-251	Studio Recording Techniques	3
WRT-201	English Composition II	3
.....	Social Science Elective *	3

**Total: 16**

**Third Semester**

MUS-150	Introduction to MIDI Sequencing & Synthesis	3
MUS-232	Music Theory II	3
MUS-234	Ear Training and Musicianship II	2
MUS-1..	Performance Ensemble I	1
.....	Humanities Elective *	3
MAT...	Mathematics Elective *	3-4†

**Total: 15-16**

**Fourth Semester**

MUS-250	Electronic Music Composition	3
MUS-261	Advanced Studio Recording	3
MUS-2..	Performance Ensemble II	1
.....	Natural Science Elective *	4
.....	Humanities Elective *	3
.....	Free Elective	3

**Total: 17**

**Degree Total Credits: 64-65**

\* General Education Elective

† If a 3-credit mathematics course is taken for the mathematics requirement, an additional course must be taken from the general education course list to reach the minimum of 30-32 General Education credits for the program.

**Code: AS.PS.SOC.WK**  
**Degree: AS**  
**Professional Studies, Social Work Option**

		<b>First Semester</b>	
MAT...	Mathematics Elective *		3-4
COM-100	Speech Communication		3
SOC-101	Sociology		3
WRT-101	English Composition I		3
.....	Humanities Elective *		3
		<b>Total: 15-16</b>	
		<b>Second Semester</b>	
PSY-101	General Psychology		3
SOC-102	Introduction to Human Services		3
SOC-103	Sociology of the Family		3
WRT-201	English Composition II		3
.....	Humanities Elective *		3
		<b>Total: 15</b>	
		<b>Third Semester</b>	
PSY-102	Introduction to Abnormal Psychology		3
SOC-113	Social Problems		3
SOC-463	Co-op Work Experience (Sociology)		3
.....	Natural Sciences Elective *		4
.....	Humanities Elective *		3
		<b>Total: 16</b>	
		<b>Fourth Semester</b>	
.....	Natural Sciences Elective *		4
.....	Humanities Electives *		6
SOC-222	Ethnic and Minority Group Relations or		3
SOC-121	Changing Roles of Women		
.....	Free Electives **		3-6
		<b>Total: 16-19</b>	
		<b>Degree Total Credits: 62-66</b>	

\* General Education Elective

\*\* Recommended: Cornerstone/Capstone/Success course and/or other Social Science elective, such as SOC-121 Changing Role of Women

**AAS DEGREE PROGRAM – BASIC STRUCTURE\***

**Curriculum Requirements**

<p><b>Code:</b> AAS  <b>Degree:</b> Associate in Applied Science</p> <p>Associate in Applied Science (A.A.S.) degree programs are designed to prepare students for employment in their chosen fields of endeavor. Such programs are not designed to prepare students for transfer into bachelor's degree programs in four-year colleges and universities although some such programs may have transfer agreements with select four-year schools for graduates wishing to continue their education in the bachelor's degree level.</p> <p>Associate in Fine Arts (A.F.A.) degree programs are designed as transfer programs leading eventually to the Bachelor of Music or Bachelor of Fine Arts degree at the four-year college/university level.</p> <p>Career programs leading to the A.A.S. degree are organized according to the following categories: Art, Business Administration, Business Technologies, and Human Services.</p> <p>To earn the Associate in Applied Science (A.A.S.) degree, a student must earn a minimum of 64 credits and complete all courses and specific requirements listed within the student's chosen curriculum. Each A.A.S. curriculum must contain the following general education requirements:*</p>		
Area of Study	Credits	Course Description
Communication	6	WRT-101 English Composition I (3 cr.) WRT-201 English Composition II (3 cr.)
Humanities	6	Two general education courses (6 cr.) to be selected from the following fields, with no more than one course (3 cr.) in any one field: Arts (Art [ART], Music [MUS], Theatre Arts [THR], Cinema Studies [CIN]) Literature (LIT) Philosophy and Religion (PHR) World Languages and Cultures (LAN)
Social Sciences	3	One general education course (3 cr.) to be selected from the following fields: Economics (ECO) Geography (GEO) Political Science (POL) Psychology (PSY) Sociology (SOC) and Anthropology (ANT)
Mathematics and Natural Sciences	3-4	One general education course (3-4 cr.) to be selected from the following fields: Mathematics (MAT) Computer Science (CIS) Biology (BIO) Chemistry (CHM) Physics (PHY)
Unassigned General Education Credits	3	To be assigned in accordance with the needs of the program.
Total GE Credits	21-22	
Other Requirements	38-45	Restricted program requirements and program support requirements.
Free Electives	0-6	Programs can make recommendations in footnotes.
Total Credits	64-66	Note: Some A.A.S. programs require more than 66 credits for licensing/accreditation purposes.

\*Health Professions and Technologies Programs have a different A.A.S. Foundation.

**Code: AAS.IDT.ANIM**  
**Degree: AAS**  
**Art, Computer Animation**

<b>First Semester</b>		
ART-105/CIN-150	History of Animation	3
ART-122	Two-Dimensional Design	3
ART-189	Computer 2D Illustration	3
ART-197	Computer Imaging	3
WRT-101	English Composition I	3

**Total: 15**

<b>Second Semester</b>		
ART-123	Life Drawing I	
	or	3
ART-124	Drawing Fundamentals	
ART-192	Computer 3D Animation I	3
MUS-151	Introduction to Audio Recording	3
WRT-201	English Composition II	
	or	3
WRT-202	Technical Writing	
.....	Mathematics/Computer Science Elective*	
	or	3-4
.....	Natural Science Elective*	

**Total: 15-16**

<b>Third Semester</b>		
ART-290	Computer 2D Animation I	3
ART-293	Computer 3D Animation II	3
CIN/THR-140	Introduction to the Cinema	3
.....	Humanities Elective *	3
.....	Social Science Elective *	3
ART...	Studio Art Elective **	3

**Total: 18**

<b>Fourth Semester</b>		
ART-271	Portfolio Presentation	2
ART-261	Computer 2D Animation II	3
ART-298	Interactive Multimedia	3
CIN-150	Special Topics in Cinema I	3
ART...	Studio Art Elective ***	
	or	3
ART-463	Co-Op Work Experience [ART]	
.....	Humanities Elective *	3

**Total: 17**

**Degree Total Credits: 65-66**

\*General Education Elective

\*\* Studio Art Electives include: ART-123, ART-124, ART-127, ART-181, ART-184, ART-192, ART-189, ART-197, ART-223, ART-226, ART-228, ART-229, ART-259, ART-260, ART-281, ART-287, ART-288, ART-290, ART-291, ART-292, and ART-298

\*\*\* Any topic other than History of Animation

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.IDT.GRPH**  
**Degree: AAS**  
**Art, Graphic Design/Computer Graphics**

<b>First Semester</b>		
ART-122	Two-Dimensional Design	3
ART-123	Life Drawing I	
	or	3
ART-124	Drawing Fundamentals	
ART-189	Computer 2D Illustration	3
ART-197	Computer Imaging	3
WRT-101	English Composition I	3

**Total: 15**

<b>Second Semester</b>		
ART-226	Letterform and Type	3
ART-259	Computer Graphics for the Web Developer	3
ART...	Art History Elective **	3
WRT-201	English Composition II	
	or	3
WRT-202	Technical Writing	
.....	Mathematics/Computer Science Elective*	
	or	3-4
.....	Natural Science Elective*	

**Total: 15-16**

<b>Third Semester</b>		
ART-260	Graphic Design I	3
ART-287	Computer Layout I	3
.....	Humanities Elective *	3
.....	Social Science Elective *	3
ART...	Studio Art Electives ***	6

**Total: 18**

<b>Fourth Semester</b>		
ART-271	Portfolio Presentation	2
ART-261	Graphic Design II	3
ART-298	Computer Layout II	3
CIN-150	Studio Art Elective ***	3
ART...	Studio Art Elective ***	
	or	3
ART-463	Co-Op Work Experience [ART]	
.....	Humanities Elective (other than ART-...)*	3

**Total: 17**

**Degree Total Credits: 65-66**

\* General Education Elective

\*\* Humanities General Education Electives in Art History include ART-102, ART-103, ART-104, ART-107, or ART-110

\*\*\* Studio Art Electives include ART-123, ART-124, ART-127, ART-181, ART-184, ART-192, ART-189, ART-197, ART-223, ART-226, ART-228, ART-229, ART-259, ART-260, ART-281, ART-287, ART-288, ART-290, ART-291, ART-292, and ART-298

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.BUS.INFO.SYS**

**Degree: AAS**

**Business Administration, Management Information Systems**

**First Semester**

BUS-101	Introduction to Business	3
INF-101	Introduction to Information Technology	3
MAT...	Mathematics Elective *	3-4
.....	Restricted Programming Language Elective Fundamentals **	3
WRT-101	English Composition I	3

**Total: 15-16**

**Second Semester**

.....	Restricted Programming Language Elective Advanced ***	3
ACC-101	Accounting I	3
BUS-207	Principles of Management	3
ECO-101	Macroeconomics	3
INF-114	Microsoft Office	3
WRT-201	English Composition I	3
	or	3
WRT-202	Technical Writing	

**Total: 18**

**Third Semester**

ACC-201	Accounting II	3
BUS-201	Marketing Principles	3
BUS...	Speech Communication	3
INF-217	Database for Application [Oracle]	3
.....	Humanities Elective	3

**Total: 15**

**Fourth Semester**

.....	Restricted Business Elective †	3
BUS-271	E-Commerce	3
	or	3
BUS-210	E-Marketing	
INF-160	Networking Technologies & Data Communications	3
INF-208	Systems Analysis and Design †	3
INF-228	Excel for Problem Solving	1
.....	Humanities Elective	3

**Total: 16**

**Degree Total Credits: 64-65**

\* MAT-150, MAT-155, MAT-180, MAT-223, or MAT-268

\*\* INF-145, INF-152, INF-153

\*\*\* Part 2 of a continuing sequence: INF-224, INF-246, and INF-268

† BUS-263, ACC-120, ACC-202, BNF-201, BUS-105, BUS-110, BUS-233, BUS-262

‡ This course is offered only during the spring semester

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.BUS.ACCT**  
**Degree: AAS**  
**Business Administration, Accounting**

**First Semester**

ACC-101	Accounting I	3
ACC-120	Computerized Accounting	3
BUS-101	Introduction to Business	3
INF-114	Microsoft Office	3
WRT-101	English Composition I	3

**Total: 15**

**Second Semester**

ACC-201	Accounting II	3
BUS-233	Business Law I	3
COM-100	Speech Communication	3
ECI-101	Macroeconomics	3
WRT-201	English Composition II	3
	or	3
WRT-202	Technical Writing	3
.....	Humanities Elective	3

**Total: 18**

**Third Semester**

ACC-202	Intermediate Accounting I	3
BNF-201	Principles of Finance	3
BUS...	Restricted Business Elective ***	3
ACC...	Restricted Accounting Elective *	3
MAT...	Mathematics Elective **	3-4

**Total: 15-16**

**Fourth Semester**

ACC...	Restricted Accounting Elective *	3
ACC-203	Intermediate Accounting II	3
ACC-215	Topics in Accounting	3
INF-228	Excel for Problem Solving	1
.....	Humanities Elective	3
BUS...	Restricted Business Elective ***	3

**Total: 16**

**Degree Total Credits: 64-65**

\* ACC-107, ACC-115, ACC-463

\*\* MAT-150, MAT-155, MAT-180, MAT-223, MAT-268

\*\*\* BNF-102, BNF-202, BNF-203, BUS-234, BUS-207, BUS-170, BUS-201, BUS-205, BUS-116, BUS-262

**Note:** Students interested in transferring to a four-year institution should refer to AS.PS.BUS.ACCT.

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.BUS.BANK**  
**Degree: AAS**  
**Business Administration, Banking and Finance**

**First Semester**

ACC-101	Accounting I	3
BNF-101	Principles of Banking	3
BUS-101	Introduction to Business	3
BUS-103	Business Mathematics	3
WRT-101	English Composition I	3

**Total: 15**

**Second Semester**

ACC-201	Accounting II	3
COM-100	Speech Communication	3
ECO-101	Macroeconomics	3
WRT-201	English Composition II	3
	or	3
WRT-202	Technical Writing	3
INF-101	Introduction to Information Technology	3

**Total: 15**

**Third Semester**

BNF-201	Principles of Finance	3
BNF-203	Cash Management	3
BUS-233	Business Law I	3
.....	Humanities Elective	3
MAT...	Mathematics Elective *	3-4

**Total: 15-16**

**Fourth Semester**

BNF-202	Asset Management	3
BNF-208	International Finance	3
.....	Humanities Elective	3
BUS...	Restricted Business Elective I **	3
BUS...	Restricted Business Elective II ***	3
.....	Free Electives †	3

**Total: 18**

**Degree Total Credits: 63-64**

\* MAT-150, MAT-155, MAT-223, MAT-268

\*\* BNF-102, BUS-201, BUS-207

\*\*\* BNF-463, BNF-207, BUS-234, BUS-262

† Students can choose WEX-101 [2 cr.] and a WEX experience course [1 cr.]: WEX-201, WEX-204, WEX-205, WEX-206, or WEX-208 to fulfill this 3-credit elective.

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.BUS.E-BUS.MGMT**

**Degree: AAS**

**Business Administration, E-Business Management**

**First Semester**

BUS-101	Introduction to Business	3
INF-114	Microsoft Office	3
INF-163	Internet Concepts and Applications	3
MAT...	Mathematics Elective *	3-4
WRT-101	English Composition I	3

**Total: 15-16**

**Second Semester**

ACC-101	Accounting I	3
BUS-107	e-Tailing	3
BUS-104	Customer Service	3
BUS-105	Business Communications	3
INF-146	Web Development	3
WRT-201	English Composition I	3
	or	3
WRT-202	Technical Writing	3

**Total: 18**

**Third Semester**

ACC-201	Accounting II	3
BNF-201	E-Marketing	3
BUS...	Speech Communication	3
BUS-205	Entrepreneurship	3
	or	3
BUS-110	Transportation Logistics & Supply Chain Management	3
.....	Humanities Elective	3

**Total: 15**

**Fourth Semester**

BUS-207	Principles of Management	3
BUS-211	Internet Law	3
BUS-271	E-Commerce	3
ECO-101	Macroeconomics	3
INF-228	Excel for Problem Solving	1
.....	Humanities Elective	3

**Total: 16**

**Degree Total Credits: 64-65**

\* Choose from MAT-150, MAT-155, MAT-180, MAT-223, or MAT-268

**Code: AAS.BT.HR.GEN**

**Degree: AAS**

**Business Technologies, Hotel/Restaurant/Hospitality - General**

Students interested in Hotel/Restaurant/Hospitality and related studies, but are not certain in which specific area they wish to specialize, should enroll in this program.

<b>First Semester</b>		
BUS-101	Introduction to Business	3
HRM-101	Introduction to Hospitality Management	3
HRM-102	Food Protection	3
HRM-103	Professional Food Preparation Techniques	3
HRM-106	Menu Planning and Nutrition	1
WEX-163	Nutrition Today	3
<b>Total: 16</b>		
<b>Second Semester</b>		
BUS-103	Business Mathematics	3
WRT-101	English Composition I	3
.....	Hotel/Restaurant/Hospitality Electives †	5
.....	Restricted Electives ‡	6
<b>Total: 17</b>		
<b>Third Semester</b>		
WRT-201	English Composition II	3
.....	Hotel/Restaurant/Hospitality Electives †	6
.....	General Education Electives **	7-8
<b>Total: 16-17</b>		
<b>Fourth Semester</b>		
HRM-217	Issues in the Hospitality Industry	2
.....	Hotel/Restaurant/Hospitality Electives †	3
.....	Restricted Electives ‡	3
.....	General Education Electives *	6
.....	Free Elective	2
<b>Total: 16</b>		

**Degree Total Credits: 65-66**

\* Two general education courses to be selected from the following fields, with no more than one course [3 cr.] in any one field: ART, MUS, THR, CIN, HIS, LIT, PHR, LAN, ECO, GEO, POL, PSY, SOC, ANT

\*\* Two 4 cr. general education courses [8 cr.] to be selected from the following fields: MAT, CIS, BIO, CHM, PHY, ESC

† Hotel/Restaurant/Hospitality Electives may be satisfied by courses in Accounting, Business Administration, and Hotel/Restaurant/Hospitality

‡ This requirement may be satisfied by either Business Administration or other general education courses

**Code: AAS.BT.HR.HOSP**

**Degree: AAS**

**Business Technologies, Hotel/Restaurant/Hospitality - Hospitality Management**

Students interested specifically in the management of people, goods, and services in the hospitality industry, should enroll in this program option. Students will understand the regulations and standards that concern the hospitality industry and be proficient in food preparation, purchasing, and all phases of hospitality work, supervision and management. Graduates are eligible for jobs and supervisory or middle management positions in hotels, restaurants, food service companies, and related areas of the hospitality industry.

**First Semester**

BUS-101	Introduction to Business	3
HRM-103	Professional Food Preparation Techniques	3
HRM-101	Introduction to Hospitality Management	3
HRM-102	Food Protection and Safety	3
HRM-106	Menu Planning and Nutrition	1
WEX-163	Nutrition Today	3

**Total: 16**

**Second Semester**

ACC-206	Hospitality Accounting ‡	3
BUS-103	Business Mathematics	3
HRM-217	Issues in the Hospitality Industry	2
HRM-462	Co-Op Work Experience (H/R/H)	2
WRT-101	English Composition I	3
.....	General Education Elective *	3

**Total: 16**

**Third Semester**

HRM-108	Computer Applications/Hospitality Industry	1
HRM-104	Front Office Procedures †	2
BUS-233	Business Law I	3
HRM-207	Hotel Sales & Convention Planning	1
HRM-204	Food Purchasing	2
.....	Free Elective	2
WRT-201	English Composition II	3
.....	General Education Elective *	3

**Total: 17**

**Fourth Semester**

HRM-201	Food and Beverage Cost Control	1
HRM-205	Restaurant Service Management	3
HRM-206	Commercial Restaurant Operation ‡	3
HRM-203	Beverage Management	2
.....	General Education Elective **	7-8

**Total: 16-17**

**Degree Total Credits: 65-66**

\* General Education Electives: One general education course to be selected from the following fields, with no more than one course [3 cr.] in any one field: ART, MUS, THR, CIN, HIS, LIT, PHR, LAN, ECO, GEO, POL, PSY, SOC, ANT

\*\* General Education Electives: Two general education courses [7-8 cr.] to be selected from the following fields: MAT/CIS, BIO, CHM, PHY

† Class offered only during fall semester

‡ Class offered only during spring semester

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Note:** Students who enter this program in the spring should reverse the THIRD and FOURTH semester, that is, take the FOURTH semester before the THIRD semester.

**Code: AAS.BT.HR.CATER**

**Degree: AAS**

**Business Technologies, Hotel/Restaurant/Hospitality - Catering and Banquet Management**

Students interested specifically in the management and operation of a facility offering catering and banquet services should enroll in this program option. Students will understand the regulations and standards that concern the hospitality industry and be proficient in food preparation and production, purchasing, and all phases of decorating and serving food. Graduates are eligible for jobs and supervisory or middle management positions in the banquet department of hotels, restaurants, food service companies, and related areas of the hospitality industry.

**First Semester**

BUS-101	Introduction to Business	3
HRM-101	Introduction to Hospitality Management	3
HRM-102	Food Protection	3
HRM-103	Professional Food Preparation Techniques	3
HRM-106	Menu Planning and Nutrition	1
WEX-159	Nutrition Today	3

**Total: 16**

**Second Semester**

ACC-206	Hospitality Accounting	3
BUS-103	Business Mathematics	3
HRM-108	Computer Applications for the Hospitality Industry	1
HRM-462	Co-Op Work Experience [H/R/H]	2
WRT-101	English Composition I	3
.....	General Education Elective	3

**Total: 17**

**Third Semester**

HRM-202	Quantity Food Production and Service †	3
HRM-203	Beverage Management	2
HRM-204	Food Purchasing	2
HRM-214	Banquet & Catering Management	2
.....	Humanities Elective *	3
.....	Social Sciences Elective *	3

**Total: 16**

**Fourth Semester**

HRM-110	Introduction to Baking	3
HRM-201	Food and Beverage Cost Control	1
HRM-206	Commercial Restaurant Operation †	3
HRM-207	Hotel Sales & Convention Planning	1
HRM-213	Classical Garde-Manger †	3
.....	Natural Sciences Elective *	
	or	
MAT/CIS..	Mathematics/Computer Science Elective *	3-4
.....	Humanities Elective *	3
HRM-205	Restaurant Service Management	3

**Total: 17-18**

**Degree Total Credits: 65-66**

\*General Education Electives: Two general education courses to be selected from the following fields, with no more than one course [3 cr.] in any one field: ART, MUS, THR, CIN, HIS, LIT, PHR, LAN, ECO, GEO, POL, PSY, SOC, ANT

\*\*General Education Electives: Two general education courses [7-8 cr.] to be selected from the following fields: MAT, CIS, BIO, CHM, PHY

† Class offered only during spring semester.

‡ Class offered only during fall semester.

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.BT.HR.CUL.ERP**

**Degree: AAS**

**Business Technologies, Hotel/Restaurant/Hospitality - Culinary Entrepreneurship**

This program option consists of foundation classes for culinary students or professionals who are looking for alternative ways to earn income in the culinary industry. This program is geared to professionals who want to break out of a particular niche or specialty within the culinary industry or to students enrolled in traditional cooking and hospitality programs who want broader exposure to the industry than is provided in the typical culinary arts curriculum.

<b>First Semester</b>		
BUS-101	Introduction to Business	3
HRM-101	Introduction to Hospitality Management	3
HRM-102	Food Protection	3
HRM-103	Professional Food Preparation Techniques	3
HRM-106	Menu Planning and Nutrition	1
HRM-110	Introduction to Baking	3
<b>Total: 16</b>		
<b>Second Semester</b>		
HRM-108	Computer Applications/Hospitality Industry	1
HRM-201	Food and Beverage Cost Control	1
HRM-212	International Cuisine	3
HRM-214	Banquet & Catering Management	2
WRT-101	English Composition I	3
.....	General Education Electives *	6
<b>Total: 16</b>		
<b>Third Semester</b>		
ACC-206	Hospitality Accounting	3
ART-184	Digital Photography	3
WRT-201	English Composition II	3
.....	General Education Electives **	7-8
<b>Total: 16-17</b>		
<b>Fourth Semester</b>		
BUS-205	Entrepreneurship	3
HRM/BUS-129	Event Planning & Management I	3
HRM-205	Restaurant Service Management	3
HRM-213	Classical Garde-Manger	3
HRM-462	Co-op Work Experience (H/R/H)	2
HRT-115	Floral Design	3
<b>Total: 17</b>		

**Degree Total Credits: 65-66**

\* Two general education courses to be selected from the following fields, with no more than one course [3 cr.] in any one field: ART, MUS, THR, CIN, HIS, LIT, PHR, LAN, ECO, GEO, POL, PSY, SOC, ANT

\*\* Two general education courses [7-8 cr.] to be selected from the following fields: MAT, CIS, BIO, CHM, PHY

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.BT.HR.EVENT**

**Degree: AAS**

**Business Technologies, Hotel/Restaurant/Hospitality - Event Planning and Management Option**

Students who choose this option should have strong organizational and communication skills. Business relies on successful events to encourage growth and promote enthusiasm throughout an industry in regards to their company. The Event Planner coordinates and organizes meetings, luncheons and other special events. Some Event Planners ensure that the company conducting the meeting or event is aware to the facility's services and limitations. The Event Planner also must contact a facility representative and other vendors and organize other details for the event.

<b>First Semester</b>		
BUS-101	Introduction to Business	3
HRM-101	Introduction to Hospitality Management	3
HRM-102	Food Protection	3
HRM-104	Front Office Procedures	2
INF-101	Introduction to Information Technology	3
WRT-101	English Composition I	3
<b>Total: 17</b>		
<b>Second Semester</b>		
BUS-205	Entrepreneurship	3
BUS-207	Principles of Management	3
HRM/BUS-129	Event Planning & Management I	3
HRM-203	Beverage Management	2
HRM-214	Banquet & Catering Management	2
WRT-201	English Composition II	3
<b>Total: 16</b>		
<b>Third Semester</b>		
ACC-206	Hospitality Accounting	3
HRM-205	Restaurant Service Management	3
HRM/BUS-229	Event Planning and Management II	3
.....	General Education Electives *	7-8
<b>Total: 16-17</b>		
<b>Fourth Semester</b>		
BUS-201	Marketing Principles	3
BUS-233	Business Law I	3
HRM-217	Issues in the Hospitality Industry	2
HRM-462	Co-op Work Experience (H/R/H)	2
.....	General Education Electives **	6
<b>Total: 16</b>		
<b>Degree Total Credits: 65-66</b>		

\* Two general education courses [7-8 cr.] to be selected from the following fields: MAT, CIS, BIO, CHM, PHY

\*\* Two general education courses to be selected from the following fields, with no more than one course [3 cr.] in any one field: ART, MUS, THR, CIN, HIS, LIT, PHR, LAN, ECO, GEO, POL, PSY, SOC, ANT

**Code: AAS.HS.LAWENF**  
**Degree: AAS**  
**Human Services, Law Enforcement Studies**

<b>First Semester</b>		
CRJ-101	Introduction to Criminal Justice	3
SOC-101	Sociology	3
WEX-101	Dynamics of Health and Fitness	2
WRT-101	English Composition I	3
.....	Humanities Elective *†	3
.....	Social Sciences Elective *‡	3

**Total: 17**

<b>Second Semester</b>		
CRJ-109	Contemporary Issues in Policing	3
CRJ-113	The Juvenile Justice Process	3
POL-104	State and Local Government	3
SOC-103	Sociology of the Family	3
WRT-201	English Composition II	3
WEX...	Dynamics of Health & Fitness Experience Elective	1

**Total: 16**

<b>Third Semester</b>		
CRJ-105	Police Administration ***	3
CRJ-111	Criminal Investigation	3
LIT-220	Social Aspects of Literature	3
SOC-113	Social Problems	3
MAT/CIS...	Mathematics/Computer Science Elective	
	or	3-4
.....	Natural Science Elective *	

**Total: 15-16**

<b>Fourth Semester</b>		
COM-100	Speech Communication	3
CRJ-103	Criminal Law **	3
CRJ-107	Criminology	3
PSY-102	Introduction to Abnormal Psychology	
	or	3
PSY-104	Psychology of Human Relations	
.....	Free Elective	2
.....	Humanities Elective *†	3

**Total: 17**

**Degree Total Credits: 65-66**

- \* General Education Elective
- \*\* CRJ-101 highly recommended before taking CRJ-103
- \*\*\* CRJ-101 highly recommended before taking CRJ-105
- ‡ SOC-101 highly recommended before taking CRJ-107
- ‡ PSY-101 highly recommended
- † PHR-102 highly recommended
- † HIS-112 highly recommended

**Code: AAS.HS.CARLAD.CDEV**

**Degree: AAS**

**Human Services, Career Ladder Education/Child Development**

Before entering into the AAS degree in Career Ladder Education/Child Development students *must* complete the Certificate of Achievement in Career Ladder Education/Child Development at Bergen Community College (Education Support Services Certificate [12] and COA [15] = 27 credits)

<b>First Semester</b>		
PSY-101	General Psychology	3
SOC-101	Sociology	3
WRT-101	English Composition I	3
.....	Mathematics/Computer Science *	
	or	3-4
.....	Natural Science *	

**Total: 12-13**

<b>Second Semester</b>		
EDU-102	Introduction to Special Education	3
PSY-201	Child Psychology	3
SOC-103	Sociology of the Family	3
WEX-101	Dynamics of Health and Fitness	2
WRT-201	English Composition II	3

**Total: 14**

<b>Third Semester</b>		
COM-100	Speech Communication	3
EDU-132	The Parenting of Very Young Children	3
.....	Social Science Elective *	3
.....	Humanities Elective **	3
WEX-2..	Dynamics of Health and Fitness Experience	1

**Total: 13**

**Degree Total Credits: 39-40**

\* General Education Elective

\*\* Music Appreciation [MUS-101] is recommended

**Code: AAS.HS.CORR**  
**Degree: AAS**  
**Human Services, Correctional Studies**

<b>First Semester</b>		
CRJ-101	Introduction to Criminal Justice	3
WEX-101	Dynamics of Health and Fitness	2
WRT-101	English Composition I	3
.....	Humanities Elective *	3
.....	Social Sciences Elective †	3
<b>Total: 17</b>		

<b>Second Semester</b>		
WEX...	Dynamics of Health and Fitness Experience *	1
CRJ-108	Topics in Criminal Justice	3
CRJ-113	The Juvenile Justice Process	3
POL-104	State and Local Government	3
SOC-101	Sociology	3
WRT-201	English Composition II	3
<b>Total: 16</b>		

<b>Third Semester</b>		
CRJ-107	Criminology †	3
CRJ-114	Correctional Administration**	3
LIT-220	Social Aspects of Literature	3
SOC-103	Sociology of the Family	3
MAT/CIS...	Mathematics/Computer Science Elective *	
	or	
.....	Natural Science Elective *	3-4
<b>Total: 15-16</b>		

<b>Fourth Semester</b>		
COM-100	Speech Communication	3
CRJ-115	Correctional Law ***	3
PSY-102	Introduction to Abnormal Psychology	
	or	3
PSY-104	Psychology of Human Relations	
SOC-113	Social Problems	3
.....	Free Elective ††	3
.....	Humanities Elective ‡	3
<b>Total: 18</b>		

**Degree Total Credits: 66-67**

\* General Education Elective

\*\* CRJ-102 highly recommended before taking CRJ-114

\*\*\* CRJ-102 highly recommended before taking CRJ-115

† SOC-101 highly recommended before taking CRJ-107

† PSY-101 highly recommended

†† CRJ-463 Co-Op Education [Corrections] highly recommended

‡ PHR-102 highly recommended

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.HS.EARLY.CHILD**  
**Degree: AAS**  
**Human Services, Early Childhood Education**

<b>First Semester</b>		
PSY-101	General Psychology	3
SOC-102	Introduction to Human Services	3
WRT-101	English Composition I	3
.....	Humanities Elective *	3
.....	Natural Science *	
	or	3-4
.....	Mathematics/Computer Science Elective *	
<b>Total: 15-16</b>		
<b>Second Semester</b>		
COM-100	Speech Communication	3
EDU-101	Introduction to Education	3
EDU-120	Early Childhood Education I	3
WEX-101	Dynamics of Health and Fitness	2
WRT-201	English Composition II	3
.....	Social Science Elective *	3
<b>Total: 17</b>		
<b>Third Semester</b>		
EDU-124	Curriculum Materials and Methods	3
EDU-130	Infants & Toddlers in Early Childhood Ed Settings	3
EDU-220	Early Childhood Education II	3
EDU-222	Supervised Field Work Experience I	2
EDU-223	Field Work Seminar I	2
PSY-201	Child Psychology	3
WEX...	Dynamics of Health and Fitness Experience	1
<b>Total: 17</b>		
<b>Fourth Semester</b>		
EDU-126	Developing and Implementing Curriculum	3
EDU-132	The Parenting of Very Young Children	3
EDU-224	Supervised Field Work Experience II	2
EDU-225	Field Work Seminar II	2
SOC-103	Sociology of the Family	
	or	3
SOC-120	Sociology of Gender Roles	
.....	Humanities Elective *	3
<b>Total: 16</b>		
<b>Degree Total Credits: 65-66</b>		

\* General Education Elective

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**AAS DEGREE PROGRAMS – HEALTH PROFESSIONS AND CAREER TECHNOLOGIES**

**Curriculum Requirements**

<p><b>Code:</b> AAS <b>Degree:</b> Associate in Applied Science</p> <p>Associate in Applied Science (A.A.S.) degree programs are designed to prepare students for employment in their chosen fields of endeavor. Such programs are not designed to prepare students for transfer into bachelor's degree programs in four-year colleges and universities although some such programs may have transfer agreements with select four-year schools for graduates wishing to continue their education in the bachelor's degree level.</p> <p>Career programs leading to the A.A.S. degree are organized according to the following categories: Health Professions and Career Technologies.</p> <p>To earn the Associate in Applied Science (A.A.S.) degree, a student must earn a minimum of 64 credits and complete all courses and specific requirements listed within the student's chosen curriculum. Each A.A.S. curriculum in Health Professions or Technologies must contain the following general education requirements:</p>		
<b>Area of Study</b>	<b>Credits</b>	<b>Course Description</b>
Communication	6	WRT-101 English Composition I (3 cr.) WRT-201 English Composition II (3 cr.)
Humanities	6	Two general education courses (6 cr.) to be selected from the following fields, with no more than one course (3 cr.) in any one field: Arts (Art [ART], Music [MUS], Theatre Arts [THR], Cinema Studies [CIN]) Literature (LIT) Philosophy and Religion (PHR) World Languages and Cultures (LAN)
Social Sciences	3	One general education course (3 cr.) to be selected from the following fields: Economics (ECO) Geography (GEO) Political Science (POL) Psychology (PSY) Sociology (SOC) and Anthropology (ANT)
Mathematics, Natural Sciences, and Technology	7-8	Two general education courses (7-8 cr.) to be selected from the following fields: Mathematics (MAT) Computer Science (CIS) Biology (BIO) Chemistry (CHM) Physics (PHY)
GE Electives	0-3	If needed to reach the Foundation minimum of 20-22 credits, select one course from the BCC general education course list. If not needed, then 3-credit Free Elective or no requirement in this category.
Total GE Credits	20-22	
Other Requirements	38-45	Restricted program requirements and program support requirements.
Free Electives	0-6	Programs can make recommendations in footnotes.
Total Credits	64-66	Note: Some A.A.S. programs require more than 66 credits for licensing/accreditation purposes.

**Code: AAS.HP.DENTL**

**Degree: AAS**

**Health Professions, Dental Hygiene**

Program Length: 24 months; Preadmission Test: Dental Admissions Exam; GPA for admissions eligibility: 2.50

High School prerequisite courses: Chemistry, with lab; Biology, with lab; Algebra; College substitutions: BIO-109; MAT-035; CHM-100; Application Deadline: February 1; Program Admits: Fall semester

Note: High School Biology is waived if College Biology, preferably BIO-109, is successfully completed. Eligible candidates are invited to sit for the Dental Hygiene Admissions Examination.

<b>First Semester</b>		
BIO-104	Microbiology	4
BIO-109	Anatomy and Physiology I	4
DHY-101	Oral Hygiene I	3
DHY-108	Dental and Oral Anatomy and Physiology	2
DHY-109	Oral Embryology and Histology	2
WRT-101	English Composition I	3
<b>Total: 18</b>		
<b>Second Semester</b>		
BIO-209	Anatomy and Physiology II	4
DHY-201	Oral Hygiene II	3
DHY-205	Dental Radiology	3
DHY-209	Periodontology I	1
WEX-101	Dynamics of Health and Fitness	2
WRT-201	English Composition II	3
<b>Total: 16</b>		
<b>Summer Session</b>		
CHM-110	Basic Biochemistry	4
DHY-200	Pharmacology for Dental Hygiene	2
DHY-220	Local Anesthesia	1
<b>Total: 7</b>		
<b>Third Semester</b>		
DHY-202	Oral Hygiene III	4
DHY-204	Dental Materials	2
DHY-206	Community Oral Health I	2
DHY-207	General and Oral Pathology	3
DHY-219	Periodontology II	1
COM-100	Speech Communication	3
WEX...	Dynamics of Health & Fitness Experience Elective	1
<b>Total: 16</b>		
<b>Fourth Semester</b>		
DHY-203	Oral Hygiene IV	4
DHY-214	Nutrition in Dental Health	2
DHY-216	Community and Oral Health II	1
PSY-101	General Psychology	3
SOC-101	Sociology	3
.....	Humanities Elective *	3
<b>Total: 16</b>		
<b>Degree Total Credits: 73</b>		

\*General Education Elective

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.HP.DMS**

**Degree: AAS**

**Health Professions, Diagnostic Medical Sonography**

Program length: 24 months

GPA for admissions eligibility: 2.50

Application Prerequisites: High school students are required to have taken advanced placement Biological Science (AP test documentation required,) high school advanced placement Physics (AP test documentation required,) and high school Algebra. If you have not taken these courses in high school, you need to take

BIO-109 Anatomy & Physiology I, PHY-185 Introduction to Physics, and MAT-035 or MAT-031/032 Algebra

Application Deadline: February 1

Program Admits: Fall semester

Note: This regional program utilizes clinical education centers throughout the State of New Jersey. Students might be required to travel to distant sites and provide their own transportation.

<b>First Semester</b>		
BIO-109	Anatomy and Physiology I	4
DMS-101	Ultrasound Physics and Instrumentation I	2
DMS-102	Clinical Medicine & Patient Care	2
DMS-113	Abdominal Sonography I	3
DMS-115	Cross-Sectional Anatomy	4
WRT-101	English Composition I	3
<b>Total: 18</b>		

<b>Second Semester</b>		
BIO-209	Anatomy and Physiology II	4
DMS-201	Ultrasound Physics and Instrumentation II	2
DMS-204	Introduction to Medical Imaging	1
DMS-205	Obstetric and Gynecological Sonography	3
DMS-213	Abdominal Sonography II	3
DMS-218	Ultrasound Clinic I	1
WRT-201	English Composition II	3
<b>Total: 17</b>		

<b>Summer Session</b>		
DMS-219	Ultrasound Clinic II-Abdomen	2
.....	Humanities Elective *	3
<b>Total: 5</b>		

<b>Third Semester</b>		
DMS-214	Echocardiography I	3
DMS-220	Ultrasound Clinic III-OB/GYN	2
DMS-226	OB Sonography II	3
DMS-229	Vascular Imaging	2
WEX-101	Dynamics of Health and Fitness	2
<b>Total: 12</b>		

<b>Fourth Semester</b>		
DMS-221	Ultrasound Clinic IV-Echocardiography	2
DMS-227	Echocardiography II	3
DMS-228	Advanced Ultrasound Practices	1
.....	Humanities Elective *	3
.....	Social Science Elective *	3
WEX...	Dynamics of Health & Fitness Experience Elective	1
<b>Total: 13</b>		

<b>Fifth Semester / Summer</b>		
DMS-222	Ultrasound Clinic V-Vascular	1
DMS-230	Comprehensive Review	3
<b>Total: 4</b>		

**Degree Total Credits: 69**

\*General Education Elective

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.HP.HLTH.SCI**

**Degree: AAS**

**Health Professions, Health Science**

GPA for admissions eligibility: 2.50

Application Deadline: February 1

Program Admits: Fall and Spring semester

Note: Qualified students will be awarded 30 transfer credits. The credits will be applied to the degree in Health Science upon the completion of the curriculum. It is essential to understand that this program does not entitle the graduate eligibility to advanced certification or licensure within the Health Professions discipline.

*Students who enter into this program must be aware of the Bergen Community College policy on the number of credits that must be taken at the College. Students enrolled in the AAS degree in Health Sciences must satisfy the English, Mathematics and algebra basic skills requirements.*

Applicant graduated from a program that has acceptable accreditation agencies that is comparable to our Health Professions disciplines. Transcripts and credentials will be evaluated by an appointed admissions committee.

**First Semester**

WEX-101	Dynamics of Health and Fitness	2
WRT-101	English Composition I	3
.....	Humanities Elective *	3
MAT/CIS...	Mathematics or Computer Science Elective *	3
.....	Natural Science Elective *†	4
.....	Social Science Elective *‡	3

**Total: 18**

**Second Semester**

WRT-201	English Composition II	3
.....	Natural Science Elective *†	4
.....	Humanities Elective *	3
.....	Free Elective *	3
WEX...	Dynamics of Health & Fitness Experience	1
.....	Social Science Elective *‡	3

**Total: 17**

**Degree Total Credits: 35**

\*General Education Elective

†Natural Sciences Recommended Elective Courses

BIO-103 Microbiology

BIO-104 General Biology

BIO-109 Anatomy and Physiology I

BIO-203 General Biology II

BIO-209 Anatomy and Physiology II

CHM-100 Introduction to Chemistry

CHM-112 College Chemistry

PHY-185 Introduction to Physics

‡Social Sciences Recommended Elective Courses

PSY-101 General Psychology

PSY-102 Abnormal Psychology

SOC-101 Introduction to Sociology

SOC-103 Sociology and the Family

SOC-113 Social Problems

Upon completion of the first and second semester courses, the 30 credits accepted for licensure/certificate will be granted. Students will have earned 65 credits necessary to complete the degree requirements.

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.HP.MOA**  
**Degree: AAS**  
**Health Professions, Medical Office Assistant**

<b>First Semester</b>		
BIO-109	Anatomy and Physiology I	4
WEX-101	Dynamics of Health & Fitness	2
MOA-140	Medical Terminology	3
MOA-141	Introduction to Medical Assisting	3
INF-100	Keyboarding I	3
WRT-101	English Composition I	3
<b>Total: 18</b>		
<b>Second Semester</b>		
BIO-209	Anatomy and Physiology II	4
INF-119	Document Processing with Microsoft Word	3
MOA-240	Clinical Office Practice	4
WRT-201	English Composition II	3
.....	Humanities Elective *	3
<b>Total: 17</b>		
<b>Third Semester</b>		
WEX-159	CPR and Emergency First Aid	3
MOA-218	Medical Economics	2
MOA-241	Clinical Laboratory Technology	4
MOA-243	Medical Office Assistant Externship I	1
MOA-203	Medical Assistant Administrative Procedures I	3
.....	Free Elective *	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
MOA-200	Pharmacology for Medical Office Assistants	2
MOA-145	Medical Office Assisting: An Overview	3
MOA-244	Medical Office Assistant Externship II	1
MOA-201	Diagnostic and Procedural Coding	4
MOA-204	Medical Assistant Administrative Procedures II	3
PSY-101	General Psychology	3
<b>Total: 16</b>		
<b>Degree Total Credits: 67</b>		

\* General Education Elective

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.HP.RAD**

**Degree: AAS**

**Health Professions, Radiography**

Program Length: 24 months

Preadmission Test: Radiography Admissions Exam

GPA for admissions eligibility: 2.50

High School prerequisite courses: 1 year science [College Placement Biology and Lab]; 1 year Algebra [Algebra II].

College substitutions: BIO-109; BIO-209; MAT-035

Application Deadline: February 1

Program Admits: Fall semester

Note: High school Biology is waived if college Biology, preferably BIO-109, is successfully completed.

<b>First Semester</b>		
BIO-109	Anatomy and Physiology I	4
RAD-180	Introduction to Radiography	3
RAD-181	Radiography I	5
RAD-182	Radiography Clinical I	1
WRT-101	English Composition I	3
<b>Total: 16</b>		

<b>Second Semester</b>		
BIO-209	Anatomy and Physiology II	4
RAD-276	Principles of Imaging Equipment	3
RAD-281	Radiography II	4
RAD-282	Radiography Clinical II	1
WRT-201	English Composition II	3
<b>Total: 15</b>		

<b>Summer Semester</b>		
RAD-280	Image Production and Evaluation	3
RAD-283	Intermediate Radiography Clinical	3
<b>Total: 6</b>		

<b>Third Semester</b>		
RAD-183	Radiographic Pathology	2
RAD-184	Advanced Imaging Equipment & Patient Care Practices	3
RAD-285	Radiography III	4
RAD-286	Radiography Clinical III	1
MAT-180	Statistics I	3
COM-100	Speech Communication	3
<b>Total: 16</b>		

<b>Fourth Semester</b>		
RAD-275	Special Imaging Equipment & Therapeutic Modalities	1
RAD-288	Radiography IV	4
RAD-289	Radiography Clinical IV	3
.....	Humanities Elective *	3
.....	Social Science Elective *	3
<b>Total: 14</b>		

<b>Summer Semester</b>		
RAD-290	Senior Student Seminar	3
<b>Total: 3</b>		

**Degree Total Credits: 70**

\* General Education Elective

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.HP.RESP**

**Degree: AAS**

**Health Programs, Respiratory Therapy**

Program Length: 24 months; GPA for admissions eligibility: 2.00; High School prerequisite courses: Chemistry with lab; Biology with lab; Algebra; College substitutions: BIO-109; CHM-100; MAT-035.

Application Deadline: February 1; Program Admits: Fall semester

Note: High school Biology is waived if college Biology, preferably BIO-109, is successfully completed.

<b>First Semester</b>		
BIO-109	Anatomy and Physiology I	4
RSP-119	Introduction to Respiratory Therapy	4
RSP-121	Respiratory Therapy Clinical Externship I	2
RSP-200	Pharmacology for Respiratory Therapists	2
WRT-101	English Composition I	3
MAT/CIS...	Mathematics/Computer Science Elective *†	3-4
<b>Total: 18-19</b>		

<b>Second Semester</b>		
BIO-209	Anatomy and Physiology II	4
CHM-112	College Chemistry	4
RSP-222	Cardiopulmonary Anatomy and Physiology	4
RSP-225	Respiratory Therapy Clinical Externship II (16 hrs/wk = 224 hrs)	2
WEX-101	Dynamics of Health and Fitness	2
WRT-201	English Composition II	3
<b>Total: 19</b>		

<b>Summer Session</b>		
RSP-226	Respiratory Therapy Clinical Externship III (40 hrs/wk =240 hrs)	2
<b>Total: 2</b>		

<b>Third Semester</b>		
BIO-104	Microbiology	4
RSP-122	Clinical Medicine	3
RSP-229	Mechanical Ventilation	4
RSP-231	Respiratory Therapy Clinical Externship IV (16 hrs/wk =224 hrs)	2
RSP-240	Diagnostic Monitoring and Patient Assessment	4
WEX...	Dynamics of Health and Fitness Experience	1
<b>Total: 18</b>		

<b>Fourth Semester</b>		
RSP-227	Management in Health Care	2
RSP-235	Respiratory Therapy Clinical Externship V (16 hrs/wk =224 hrs)	2
RSP-241	Neonatal and Pediatric Respiratory Care	3
.....	Humanities Electives *	6
.....	Social Science Elective *	3
<b>Total: 16</b>		

**Degree Total Credits: 73-74**

\* General Education Elective

† Recommended: MAT-130, MAT-150, MAT-155 or MAT-180

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Note:** Successful completion of program exit examination required for graduation.

**Code: AAS.HP.VET**

**Degree: AAS**

**Health Professions, Veterinary Technology**

Program Length: 24 months

Preadmission Test: Veterinary Technology Admissions Exam

GPA for admissions eligibility: 2.00

Prerequisites: BIO-115; VET-102; VET-103; CHM-112; WRT-101

Application Deadline: November 1

Program Admits: Spring semester

Note: Applicants will only be accepted once the prerequisites stated above have been successfully completed. Applicants are strongly encouraged to meet with a program official regarding application procedures. Travel is required for all students enrolled in this program.

<b>First Semester</b>		
BIO-115	Vertebrate Anatomy and Physiology I	4
CHM-112	College Chemistry	4
VET-102	Introduction to Veterinary Technology	1
VET-103	Veterinary Medical Terminology	1
WRT-101	English Composition I	3
<b>Total: 13</b>		
<b>Second Semester</b>		
BIO-215	Vertebrate Anatomy and Physiology II	4
VET-104	Research Animal Technology	3
VET-110	Nutrition and Principles of Feeding	2
VET-112	Veterinary Pharmacology	3
WRT-201	English Composition II	3
<b>Total: 15</b>		
<b>Summer Session</b>		
BIO-104	Microbiology	4
VET-220	Veterinary Technology Externship I	1
.....	Humanities Elective *	
<b>Total: 8</b>		
<b>Third Semester</b>		
VET-203	Veterinary Nursing I	3
VET-204	Veterinary Dental Techniques	3
VET-205	Clinical Laboratory Procedures I	3
VET-207	Diagnostic Imaging	3
.....	Humanities Elective *	3
<b>Total: 15</b>		
<b>Fourth Semester</b>		
VET-214	Veterinary Nursing II	3
VET-217	Clinical Laboratory Procedures II	3
VET-216	Veterinary Office Management	2
VET-219	Surgical Assistance and Anesthesia	3
.....	Social Science Elective *	3
<b>Total: 14</b>		
<b>Summer Session</b>		
VET-218	Farm Animal Nursing 3 †	
VET-221	Veterinary Technology Externship II	1
<b>Total: 4</b>		

**Degree Total Credits: 69**

\* General Education Course

† VET-218 is taught off-campus

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.NURS.DAY**

**Degree: AAS**

**Nursing, Day Session**

Program Length: 2 academic years

Preadmission Test: Nursing Program Admissions Exam

GPA for admissions eligibility: 2.50

High School prerequisite courses: Chemistry and Biology with lab; Algebra

College substitutions: CHM-100; BIO-109; MAT-035 or MAT-031/032

Application Deadline: February 1 for fall admission

Program Admits: Fall semester

The day nursing program accepts students for fall only.

The total number of credits required for the AAS degree is 69: 33 nursing credits and 36 general credits.

Exit Examination: A nationally standardized examination will be given. Only those students who achieve a passing score and have met all other degree requirements will be certified by the Director to take the NCLEX-RN.

<b>First Semester</b>		
BIO-109	Anatomy and Physiology I	4
NUR-181	Physical Assessment	1
NUR-182	Pharmacology for Nurses	1
NUR-183	Basic Concepts and Skills of Nursing	6
PSY-101	General Psychology	3
WRT-101	English Composition I	3
<b>Total: 18</b>		
<b>Second Semester</b>		
BIO-209	Anatomy and Physiology II	4
NUR-281	Adult Health Nursing A	4
NUR-282	Adult Health Nursing B	4
PSY-106	Developmental Psychology	3
WRT-201	English Composition II	3
<b>Total: 18</b>		
<b>Third Semester</b>		
BIO-104	Microbiology	4
NUR-284	Maternal-Child Health Nursing	5
NUR-285	Mental Health Nursing	4
SOC-101	Sociology	3
WEX-101	Dynamics of Health and Fitness	2
<b>Total: 18</b>		
<b>Fourth Semester</b>		
.....	Humanities Elective *	6
WEX...	Dynamics of Health and Fitness Experience	1
NUR-290	Adult Health Nursing C	4
NUR-291	Adult Health Nursing D	4
<b>Total: 15</b>		
<b>Degree Total Credits: 69</b>		

\* General Education Elective

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.NURS.EVE**

**Degree: AAS**

**Nursing, Evening Session**

Program Length: 2 academic years; Preadmission Test: Nursing Program Admissions Exam;

GPA for admissions eligibility: 2.50; High School prerequisite courses: Chemistry and Biology with lab; and Algebra; College substitutions: CHM-100; BIO-109; MAT-035 or MAT-031/032; College prerequisite courses: BIO-109 and BIO-209; WRT-101 and WRT-201; PSY-101 and PSY-106; SOC-101

Application Deadline: October 1 for spring admission Program Admits: Spring semester

**Exit Examination:** A nationally standardized examination will be given. Only those students who achieve a passing score and have met all other degree requirements will be certified by the Director of Nursing to take the NCLEX-RN.

<b>First Semester</b>		
BIO-109	Anatomy and Physiology I †	4
PSY-101	General Psychology †	3
WRT-101	English Composition I †	3
<b>Total: 10</b>		
<b>Second Semester</b>		
BIO-209	Anatomy and Physiology II †	4
PSY-106	Developmental Psychology †	3
WRT-201	English Composition II †	3
<b>Total: 10</b>		
<b>Summer Session</b>		
SOC-101	Sociology †	3
WEX-101	Dynamics of Health and Fitness †	2
<b>Total: 5</b>		
<b>Third Semester</b>		
NUR-181	Physical Assessment	1
NUR-182	Pharmacology for Nurses	1
NUR-183	Basic Concepts and Skills of Nursing	6
<b>Total: 8</b>		
<b>Fourth Semester</b>		
NUR-281	Adult Health Nursing A	4
NUR-282	Adult Health Nursing B	4
<b>Total: 8</b>		
<b>Fifth Semester / Summer</b>		
WEX...	Dynamics of Health and Fitness Experience	1
BIO-104	Microbiology	4
<b>Total: 5</b>		
<b>Sixth Semester</b>		
NUR-284	Maternal-Child Health Nursing	5
NUR-285	Mental Health Nursing	4
<b>Total: 9</b>		
<b>Seventh Semester</b>		
.....	Humanities Electives *	6
<b>Total: 6</b>		
<b>Eighth Semester</b>		
NUR-290	Adult Health Nursing C	4
NUR-291	Adult Health Nursing D	4
<b>Total: 8</b>		

**Degree Total Credits: 69**

\* General Education Elective

† Evening nursing applicants cannot be accepted until general co-requisites (8 courses) have been completed. Evening nursing program accepts students for spring only.

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.MED.INFO**  
**Degree: AAS**  
**Medical Informatics**

<b>First Semester</b>		
BIO-109	Anatomy and Physiology I	4
INF-101	Introduction to Information Technology	3
MOA-140	Medical Terminology	3
WRT-101	English Composition I	3
INF...	Programming Language Fundamentals †	3
<b>Total: 16</b>		
<b>Second Semester</b>		
BIO-209	Anatomy and Physiology II	4
MOA-201	Diagnostic and Procedural Coding	3
WRT-201	English Composition II	3
INF...	Advanced Programming Languages ‡	3
.....	Humanities Elective *	3
<b>Total: 16</b>		
<b>Third Semester</b>		
INF-217	Database for Applications [Oracle]	3
MOA-141	Introduction to Medical Assisting	3
MOA-218	Medical Economics	2
WEX-101	Dynamics of Health and Fitness	2
.....	Humanities Elective *	3
MAT...	Mathematics Elective **	3-4
<b>Total: 16-17</b>		
<b>Fourth Semester</b>		
.....	Social Science Elective***	3
BUS-101	Introduction to Business	3
INF-218	Database Programming	3
INF-219	Database Administration	3
MOA-200	Pharmacology for Medical Office Assistants	2
WEX-2..	Dynamics of Health and Fitness Experience	1
<b>Total: 15</b>		

**Degree Total Credits: 63-64**

\* General Education Elective

\*\* MAT-223 recommended

\*\*\* PSY-101 Introduction to Psychology recommended

† Programming Language Electives: Fundamentals – INF-145, INF-152, INF-153

‡ Programming Language Electives: Advanced – INF-224, INF-256, INF-268

**Code: AAS.IDT.ET.GEN**

**Degree: AAS**

**Industrial and Design Technologies, General Engineering Technology**

<b>First Semester</b>		
DFT-107	Drafting I	2
ELC-101	DC-Circuit Analysis	4
TEC-180	Problem Solving Using Technology	4
WEX-101	Dynamics of Health and Fitness	2
WRT-101	English Composition I	3
.....	Social Science Elective *	3
<b>Total: 18</b>		
<b>Second Semester</b>		
CHM-100	Introduction to Chemistry	4
DFT-207	Drafting II	3
ELC-201	AC-Circuit Analysis	4
MAT-180	Precalculus: College Algebra and Trigonometry	4
WRT-201	English Composition II	3
<b>Total: 18</b>		
<b>Third Semester</b>		
DFT-210	Computer Aided Drafting I	3
ELC-203	Electronics I	4
PHY-186	General Physics I	4
.....	Humanities Elective *	3
WEX...	Dynamics of Health and Fitness Experience	1
<b>Total: 15</b>		
<b>Fourth Semester</b>		
ELC-204	Electronics II	4
PHY-286	General Physics II	4
.....	Humanities Elective *	3
.....	Restricted Electives †	3-5
<b>Total: 14-16</b>		
<b>Degree Total Credits: 65-67</b>		

\* General Education Elective

† Restricted Electives: DFT-208, DFT-211, DFT-282, MFG-119, MAT-150, MAT-280 – Recommended: students planning to transfer to a baccalaureate degree program make the choice of MAT-280

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.IDT.DRFT**  
**Degree: AAS**  
**Industrial Design Technologies, Drafting and Design Technology**

<b>First Semester</b>		
DFT-107	Drafting I	2
DFT-210	Computer Aided Drafting I	3
MFG-122	Machine Tool Principles I	3
WRT-101	English Composition I	3
.....	Social Science elective *	3
.....	Free Elective †	2
<b>Total: 16</b>		
<b>Second Semester</b>		
DFT-207	Drafting II	3
DFT-208	Engineering Graphics I	3
WRT-202	Technical Writing	3
.....	Humanities Elective *	3
.....	Free Elective †	3
<b>Total: 15</b>		
<b>Third Semester</b>		
DFT-209	Engineering Graphics II	3
DFT-215	Building Systems	3
DFT-262	Architectural Drafting	3
DFT-265	Architectural Practice & Planning	3
HRT-104	Landscape Plants & Materials I	2
PHY-185	Introduction to Physics	4
<b>Total: 18</b>		
<b>Fourth Semester</b>		
DFT-263	Architectural Design	3
DFT-266	Materials & Methods of Construction	3
DFT-282	Problem Solving using Technology	
	or	3-4
TEC-180	Technical Illustration	
CHM-102	Chemistry in Context	4
DFT-280	Building Information Modeling	
	or	3
DFT-463	Co-Op Work Experience [Drafting]	
<b>Total: 16-17</b>		

**Degree Total Credits: 65-66**

\*General Education Elective

†COM-100 Speech Communication and WEX-101 Dynamics of Health and Fitness are recommended

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.IDT.ELECT.TECH**  
**Degree: AAS**  
**Industrial and Design Technologies, Electronics Technology**

<b>First Semester</b>		
ELC-100	Introduction to Electronics Technology	2
ELC-101	DC-Circuit Analysis	4
TEC-180	Problem Solving Using Technology	4
WEX-101	Dynamics of Health and Fitness	2
WRT-101	English Composition I	3

**Total: 15**

<b>Second Semester</b>		
ELC-201	AC-Circuit Analysis	4
ELC-203	Electronics I	4
WRT-201	English Composition II	3
WEX...	Dynamics of Health and Fitness Experience	1
.....	Natural Science	
	or	3-4
.....	Mathematics/Computer Science Elective *†	

**Total: 15-16**

<b>Third Semester</b>		
ELC-204	Electronics II	4
ELC-214	Communication Systems I	4
PHY-186	General Physics I	4
.....	Humanities Elective *	3
.....	Social Science Elective *	3

**Total: 18**

<b>Fourth Semester</b>		
CHM-100	Introduction to Chemistry	4
ELC-215	Communication Systems II	4
PHY-286	General Physics II	4
WRT-202	Technical Writing	
	or	2-3
ELC-462	Co-Op Work Experience (Electronics)	
.....	Humanities Elective *	3

**Total: 17-18**

**Degree Total Credits: 65-67**

\* General Education Elective

† MAT-150 Elementary Statistics is recommended

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.IDT.MFG.TECH**

**Degree: AAS**

**Industrial Design Technologies, Manufacturing Technology**

**First Semester**

DFT-107	Drafting I	2
MFG-122	Machine Tool Principles I	3
MFG-124	Applied Metrology	3
WRT-101	English Composition I	3
ELC-110	Electric Power Technology	
	or	4
TEC-180	Problem Solving using Technology	

**Total: 15**

**Second Semester**

MFG-222	Machine Tool Principles II	3
MFG-229	Materials Processing & Fabrication	4
WRT-202	Technical Writing	3
.....	Humanities Elective *	3
.....	Free Elective †	3

**Total: 16**

**Third Semester**

MFG-119	Pro/Engineer Design I	3
MFG-226	Methods, Fixture Design & Estimating	3
MFG-227	CNC Programming I	4
MFG-130	Welding Technology I	3
PHY-185	Introduction to Physics	4

**Total: 17**

**Fourth Semester**

DFT-210	Computer Aided Drafting I	3
MFG-206	Concepts of Industrial Design	3
MFG-228	CNC Programming II	
	or	3
MFG-463	Co-Op Work Experience [Manufacturing]	
CHM-102	Chemistry in Context	4
.....	Social Science Elective *	3
.....	Free Elective †	2

**Total: 18**

**Degree Total Credits: 66**

\*General Education Elective

†COM-100 Speech Communication and WEX-101 Dynamics of Health and Fitness are recommended

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.IDT.TECH.STU**

**Degree: AAS**

**Industrial and Design Technologies, Technical Studies**

This program is available to applicants admitted under college-approved alternate-route transfer credit arrangements. "Alternate-route" signifies prior training and certifications not qualifying for college transfer credit in the ordinary way. College-approved alternate-route credits, up to a maximum of 25, will be credited against the Restricted Electives requirements, and will be counted toward the maximum of 45 total transfer credits allowed by the College's official policy on transfer credits. The College will consider corporate-, industrial-, institutional-, or government-sponsored training approved by academic departments, as well as course equivalencies recommended by the American Council on Education (ACE).

<b>First Semester</b>		
WRT-101	English Composition I	3
.....	Transfer or Restricted Electives ‡	9
.....	Social Science Elective *	3
<b>Total: 15</b>		
<b>Second Semester</b>		
.....	Transfer or Restricted Electives ‡	9
WRT-201	English Composition II	3
.....	Humanities Elective *	3
<b>Total: 15</b>		
<b>Third Semester</b>		
.....	Transfer or Restricted Electives ‡	12
WEX-101	Dynamics of Health and Fitness	2
.....	Humanities Elective *	3
<b>Total: 17</b>		
<b>Fourth Semester</b>		
.....	Transfer or Restricted Electives *	12
WEX-2..	Dynamics of Health and Fitness Elective	1
.....	Natural Science Elective	
	or	3-4
MAT/CIS...	Mathematics/Computer Science Elective *†	
<b>Total: 16-17</b>		

**Degree Total Credits: 63-64**

\* General Education Elective

† PHY-185 Introduction to Physics is highly recommended

‡ Restricted Electives: DFT-107, DFT-207, DFT-208, DFT-209, DFT-210, DFT-211, DFT-212, DFT-282, ELC-101, ELC-201, ELC-203, ELC-204, MFG-122, MFG-222, WRT-202

**Code: AAS.LS.PARALGL**  
**Degree: AAS**  
**Legal Studies, Paralegal**

**First Semester**

LGL-101	Fundamentals of Law	3
LGL-103	Legal Research and Writing	3
LGL-110	Legal Ethics	3
REA-101	Principles of Real Estate	3
WRT-101	English Composition I	3
.....	Social Sciences Elective*	3

**Total: 18**

**Second Semester**

LGL-200	Business Communications for Paralegals †	3
LGL-203	Paralegalism and Legal Procedure †	3
LGL-220	Computer Assisted Legal Research	3
WRT-201	English Composition II	3
.....	Humanities Elective *	3

**Total: 15**

**Third Semester**

LGL-202	NJ and Federal Courts †	3
LGL-205	Mechanics of Property Transactions †	3
LGL-207	Wills and Administration †	3
LGL-208	Mechanics of Family Law †	3
MAT/CIS...	Mathematics/Computer Science Elective *	
	or	3-4
.....	Natural Science Elective *	
.....	Humanities Elective *†	3

**Total: 18-19**

**Fourth Semester**

COM-100	Speech Communication	3
LGL-206	Mechanics of Commercial Transactions †	3
LGL-210	Legal Accounting I †	3
LGL-234	Personal Injury and Product Liability †	3
LGL-462	Co-Op Work Experience [Paralegal]	2

**Total: 14**

**Degree Total Credits: 64-66**

\*General Education Elective

† PHR-105 Professional Ethics is recommended

‡ Specialized course that may be offered only in the evening

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**This is an ABA approved Paralegal Program**

**Code: AAS.IT.DB**

**Degree: AAS**

**Information Technology; Database Programming and Administration**

<b>First Semester</b>		
BUS-101	Introduction to Business	3
INF-101	Introduction to Information Technology	3
INF-150	Business Programming Logic	3
WRT-101	English Composition I	3
INF...	Programming Language Fundamentals †	3
.....	Humanities/Social Science Elective *	3
<b>Total: 18</b>		
<b>Second Semester</b>		
INF...	Advanced Programming Language ‡	3
INF-114	Microsoft Office	3
INF-146	Web Development	3
WRT-201	English Composition II	3
	or	3
WRT-202	Technical Writing	3
.....	Humanities/Social Science Elective *	3
<b>Total: 15</b>		
<b>Third Semester</b>		
INF-160	Networking Technologies & Data Communications	3
INF-208	Systems Analysis and Design	3
INF-217	Database for Applications [Oracle]	3
INF-253	Technical Communications	3
MAT...	Mathematics Elective *	
	[MAT-180 or MAT-280]	
	or	4-6
	[MAT-223 or any other 3 cr. MAT course]	
	and	
	General Education Elective * †	
<b>Total: 16-18</b>		
<b>Fourth Semester</b>		
INF-218	Database Programming	3
INF-219	Database Administration	3
INF-239	Applications Development	3
INF...	Restricted INF Elective **	3
.....	Natural Science Elective *	4
<b>Total: 16</b>		

**Degree Total Credits: 65-67**

\* General Education Elective

† If a student elects a 3-credit course in Mathematics; then s/he is required to take a general education course in this category in order to meet the General Education Foundation requirement of 20-22 credits in General Education.

\*\*INF Restricted Elective - Select 1: GAM-111; INF-130; INF-267; INF-145; INF-152; INF-153; WEX-101 and INF-228, ACC-101, ACC-110, BUS-271

† Programming Language Fundamentals Elective - Select 1: INF-152, INF-145, INF-153

‡ Advanced Programming Language Elective - Select 1: INF-224, INF-246, INF-268

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.IT.NET**

**Degree: AAS**

**Information Technology, Networking Administration**

<b>First Semester</b>		
INF-101	Introduction to Information Technology	3
INF-108	PC Upgrade, Maintenance and Diagnosis	3
INF-160	Networking Technologies & Data Communications	3
INF-114	Microsoft Office	3
WRT-101	English Composition I	3
.....	Humanities/Social Science Elective *	3
<b>Total: 18</b>		
<b>Second Semester</b>		
BUS-101	Introduction to Business	3
INF-272	Windows Active Directory	3
INF-232	Windows Client	3
WRT-201	English Composition II	3
	or	3
WRT-202	Technical Writing	3
.....	Humanities/Social Science Elective *	3
<b>Total: 15</b>		
<b>Third Semester</b>		
INF-252	Windows Server	3
INF-253	Technical Communications	3
INF-254	UNIX/Linux for Network Administrators	3
INF-258	TCP/IP	3
.....	Natural Science Elective *	4
<b>Total: 16</b>		
<b>Fourth Semester</b>		
INF-256	Topics in Networking	3
	or	3
INF-219	Database Administration	3
INF-257	Network Troubleshooting	3
INF-267	Network Security	3
MAT...	Mathematics Elective *	3
	[MAT-180 or MAT-280]	3
	<b>or</b>	4-6
	[MAT-223 or any other 3 cr. MAT course]	3
	<b>and</b>	3
	General Education Elective *♦	3
INF...	Restricted Elective **	3
<b>Total: 16-18</b>		

**Degree Total Credits: 65-67**

\* General Education Elective

\*\*INF Restricted Elective - Select 1: INF-146, INF-150, INF-270, INF-271, INF-273, BUS-271, **OR** WEX-101 Dynamics of Health and Fitness **AND** INF-228 Excel for Problem Solving

♦ If a student elects a 3-credit course in Mathematics; then s/he is required to take a general education course in this category in order to meet the General Education Foundation requirement of 20-22 credits in General Education.

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.IT.OFF.TECH**  
**Degree: AAS**  
**Information Technology, Office Technology**

<b>First Semester</b>		
BUS-101	Introduction to Business	3
INF-100	Keyboarding I **	3
INF-101	Introduction to Information Technology **	3
INF-114	Microsoft Office	3
WRT-101	English Composition I	3
<b>Total: 15</b>		
<b>Second Semester</b>		
BUS-103	Business Mathematics	3
BUS-105	Business Communications	3
INF-119	Document Processing with Microsoft Word	3
INF-140	Introduction to Multimedia	3
INF-146	Web Development	3
WRT-201	English Composition II	3
	or	3
WRT-202	Technical Writing	3
<b>Total: 18</b>		
<b>Third Semester</b>		
ACC-120	Computerized Accounting	3
INF-217	Database for Applications [Oracle]	3
.....	Humanities Elective *	3
.....	Natural Science/Mathematics/Technology Elective*	3-4
.....	General Education Free Elective *	3
<b>Total: 15-16</b>		
<b>Fourth Semester</b>		
BUS-271	E-Commerce	3
INF-228	Excel for Problem Solving	1
.....	Social Science Elective *	3
INF...	Restricted INF Electives ***	6
.....	Humanities Elective *	3
<b>Total: 16</b>		
<b>Degree Total Credits: 64-65</b>		

\* General Education Elective

\*\*Credit by Exam may be available

\*\*\*Restricted INF Electives - Select 2: INF-108; INF-150; INF-160; INF-253; WEX-101 **AND** INF-165

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.IT.WEB**  
**Degree: AAS**  
**Information Technology, Web Development and Management**

<b>First Semester</b>		
BUS-101	Introduction to Business	3
INF-101	Introduction to Information Technology	3
INF-150	Business Programming Logic	3
WRT-101	English Composition I	3
INF...	Programming Language Fundamentals Elective †	3
.....	Humanities/Social Science Elective *	3
<b>Total: 18</b>		

<b>Second Semester</b>		
INF-114	Microsoft Office	3
INF-140	Introduction to Multimedia	3
INF-146	Web Development	3
WRT-201	English Composition II	3
	or	3
WRT-202	Technical Writing	3
INF...	Advanced Programming Language Elective ‡	3
<b>Total: 15</b>		

<b>Third Semester</b>		
INF-160	Networking Technologies & Data Communications	3
INF-208	Systems Analysis and Design	3
INF-217	Database for Applications [Oracle]	3
INF-253	Technical Communications	3
MAT...	Mathematics Elective *	
	[MAT-180 or MAT-280]	
	or	4-6
	[MAT-223 or any other 3 cr. MAT course]	
	and	
	General Education Elective *♦	
<b>Total: 16-18</b>		

<b>Fourth Semester</b>		
INF-239	Applications Development	3
INF-263	Advanced Web Development	3
.....	Humanities/Social Science Elective *	3
.....	Natural Science Elective *	4
INF...	INF Restricted Elective **	3
<b>Total: 16</b>		

**Degree Total Credits: 65-67**

\* General Education Elective

♦ If a student elects a 3-credit course in Mathematics, then s/he is required to take a general education course in this category in order to meet the General Education Foundation requirement of 20-22 credits in General Education.

\*\*Courses cannot duplicate as Restricted Electives when selected as Programming Electives

INF Restricted Elective - Select 1: GAM-111

INF-130, INF-145, INF-152, INF-153, INF-163, INF-230, INF-267, WEX-101 **AND** INF-165, BUS-271

† Programming Language Fundamentals Elective - Select 1: INF-152, INF-145, INF-153

‡Advanced Programming Language Elective - Select 1: INF-224, INF-246, INF-268

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.SD.GAME.PGMG**  
**Degree: AAS**  
**Software Development - Game Programming**

<b>First Semester</b>		
CIS-165	Fundamentals of Programming	3
GAM-110	Introduction to Game Architecture & Design	3
GAM-111	Game Programming 2D	3
INF-140	Introduction to Multimedia	3
WRT-101	English Composition I	3
.....	Humanities or Social Science Elective *†	3
<b>Total: 18</b>		

<b>Second Semester</b>		
CIS-265	Advanced Programming Concepts	3
GAM-211	Game Development 2D	3
INF-230	Advanced Multimedia	3
WRT-201	English Composition II	
	or	3
WRT-202	Technical	
MAT...	Mathematics Elective *	
	[MAT-180 or MAT-280]	
	or	4-6
	[MAT-223 or any other 3 cr. MAT course]	
	and	
	General Education Elective *‡	
<b>Total: 16-18</b>		

<b>Third Semester</b>		
CIS-277	Data Structures and Algorithms	3
GAM-221	Game Programming 3D	3
INF-130	Testing & Quality Assurance	3
INF...	Restricted Elective **	3
MAT/CIS...	Restricted Elective ***	4
<b>Total: 16</b>		

<b>Fourth Semester</b>		
GAM-222	Game Development 3D	3
INF-208	Systems Analysis and Design	3
PHY-186	General Physics I	4
.....	Writing/Humanities Restricted Elective ****	3
.....	Humanities or Social Science Elective *†	3
<b>Total: 16</b>		

**Degree Total Credits: 66-68**

\* General Education Elective [PSY Recommended]

\*\* INF Restricted Elective, select 1: INF-217 or INF-146

\*\*\* MAT/CIS Restricted Elective; Select 1: MAT-286 or CIS-288

\*\*\*\* Writing/Humanities Restricted Elective, select 1: WRT-204, MUS-150, MUS-151, ART-122, or ART-126

† Humanities Elective: MUS-101 or MUS-110 or ART-110

‡ If a student elects a 3-credit course in Mathematics; then s/he is required to take a general education course in this category in order to meet the General Education Foundation requirement of 20-22 credits in General Education

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.SD.GAME.TEST**  
**Degree: AAS**  
**Software Development - Game Testing**

<b>First Semester</b>		
GAM-110	Introduction to Game Architecture & Design	3
GAM-111	Game Programming 2D	3
INF-140	Introduction to Multimedia	3
WRT-101	English Composition I	3
.....	Introductory Programming Elective †	3
.....	Humanities or Social Science Elective *◆	3
<b>Total: 18</b>		
<b>Second Semester</b>		
GAM-211	Game Development 2D	3
INF-230	Advanced Multimedia	3
WRT-201	English Composition II	
	or	3
WRT-202	Technical Writing	
.....	Advanced Programming Elective ±	3
MAT...	Mathematics Elective *	
	[MAT-180 or MAT-280]	
	or	4-6
	[MAT-223 or any other 3 cr. MAT course]	
	and	
	General Education Elective *◆	
<b>Total: 16-18</b>		
<b>Third Semester</b>		
GAM-221	Game Programming 3D	3
INF-130	Testing & Quality Assurance	3
INF-208	Systems Analysis and Design	3
INF-217	Database for Applications [Oracle]	3
INF-253	Technical Communications	3
<b>Total: 15</b>		
<b>Fourth Semester</b>		
GAM-222	Game Development 3D	3
PHY-186	General Physics I	4
INF...	Restricted Elective **	3
.....	Writing/Humanities Elective ***	3
.....	Humanities/Social Science Elective *◆	3
<b>Total: 16</b>		

**Degree Total Credits: 65-67**

\* General Education Elective [PSY recommended]

\*\* INF Restricted Elective, select 1: INF-160, INF-239, INF-146

\*\*\* Writing/Humanities Required Elective, select 1: WRT-204, MUS-150, MUS-151, ART-122, ART-126

◆ Humanities: MUS-101 or MUS-110 or ART-101

◆ If a student elects a 3-credit course in Mathematics; then s/he is required to take a general education course in this category in order to meet the General Education Foundation requirement of 20-22 credits in General Education

† Introductory Programming Elective, select 1: CIS-165, INF-145, INF-153

± Advanced Programming Elective, select 1: CIS-265, INF-246, INF-268

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.ST.ENV.TECH**  
**Degree: AAS**  
**Science Technology, Environmental Technology**

<b>First Semester</b>		
BIO-101	General Biology I	4
CHM-100	Introduction to Chemistry	4
ENV-112	Environmental Health	3
WEX-101	Dynamics of Health and Fitness	2
WRT-101	English Composition I	3
<b>Total: 16</b>		
<b>Second Semester</b>		
ENV-121	Environmental Microbiology	4
MAT-150	Statistics I	3
WRT-201	English Composition II	3
.....	Science Elective **	3-4
.....	Humanities Elective *	3
<b>Total: 16-17</b>		
<b>Third Semester</b>		
BIO-227	Principles of Ecology	4
ENV-109	Environmental Policy Compliance and Regulation	3
TEC-180	Problem Solving Using Technology	4
.....	Humanities Elective *	3
.....	Social Science Elective *	3
<b>Total: 17</b>		
<b>Fourth Semester</b>		
ENV-113	Human Environment	3
ENV-122	Environmental Chemistry	4
TEC-190	Intro to Geographic Information Systems (GIS)	4
WEX...	Dynamics of Health and Fitness Experience	1
.....	General Electives ‡	3
<b>Total: 15</b>		

**Degree Total Credits: 64-65**

\* General Education Elective

\*\* Recommended Sciences Electives: BIO-203, BIO-107, ESC-113, PHY-185, ESC-112, ESC-114

‡ General Electives: ENV-461, ENV-114, BUS-101, DFT-107, COM-210, BUS-105, PSY-104, WEX-125, WRT-202

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.ST.HORT**  
**Degree: AAS**  
**Science Technology, Horticulture**

<b>First Semester</b>		
HRT-101	Fundamentals of Horticulture	3
HRT-102	Plant Science	4
HRT-104	Landscape Plants and Materials I	2
WRT-101	English Composition I	3
.....	Natural Science Elective *†	
	or	3-4
MAT/CIS...	Mathematics/Computer Science Elective *	
<b>Total: 15-16</b>		
<b>Second Semester</b>		
HRT-120	Interior Landscaping	3
HRT-232	Plant Propagation	4
HRT-233	Landscape Plants and Materials II	4
WRT-201	English Composition II	3
.....	Social Science Elective *	3
<b>Total: 17</b>		
<b>Third Semester</b>		
HRT-103	Turf and Grounds Management	3
HRT-112	Pests of Ornamental Plants	4
HRT-204	Landscape Graphics	2
HRT-236	Horticulture Marketing and Sales	3
WEX-101	Dynamics of Health and Fitness	2
.....	Humanities Elective *	3
<b>Total: 17</b>		
<b>Fourth Semester</b>		
BUS-101	Introduction to Business	3
HRT-113	Principles of Landscaping	3
HRT-462	Co-op Work Experience (Horticulture)	2
WEX...	Dynamics of Health and Fitness Experience	1
HRT...	Restricted HRT Elective ‡	3-4
.....	Humanities Elective *	3
<b>Total: 15-16</b>		

**Degree Total Credits: 64-66**

\* General Education Elective

† Recommended Natural Sciences/Mathematics Elective: BIO-108

‡ Restricted HRT Elective – HRT-115, HRT-119, HRT-235, HRT-237

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.ST.LAND**  
**Degree: AAS**  
**Science Technology, Horticulture - Landscape/Design/Build Option**

<b>First Semester</b>		
HRT-102	Plant Science	4
HRT-104	Landscape Plants and Materials I	2
HRT-113	Principles of Landscaping	3
WRT-101	English Composition I	3
.....	Natural Science Elective *	
	or	3-4
MAT/CIS...	Mathematics/Computer Science Elective *	
<b>Total: 15-16</b>		
<b>Second Semester</b>		
HRT-204	Landscape Graphics	2
HRT-233	Landscape Plants and Materials II	4
HRT-235	Landscape Site Analysis and Construction	3
WRT-201	English Composition II	3
.....	Social Science Elective *	3
<b>Total: 15</b>		
<b>Summer Session</b>		
HRT-130	Landscaping Contracting	1
HRT-462	Co-Op Work Experience (Horticulture)	2
<b>Total: 3</b>		
<b>Third Semester</b>		
.....	Humanities Elective *	3
BIO-108	Introduction to Environmental Biology	4
HRT-103	Turf and Grounds Management	3
HRT-114	Computer Applications for Landscape Design	3
HRT-213	Sustainable Design and Construction	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
.....	Humanities Elective *	3
HRT-214	Landscape Design/Build Capstone	4
HRT-215	Landscape Design/Build Management	3
HRT-236	Horticulture Marketing and Sales	3
.....	Restricted HRT Elective †	3-4
<b>Total: 16-17</b>		

**Degree Total Credits: 65-67**

\* General Education Elective

† Restricted HRT Elective

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.ST.LST**  
**Degree: AAS**  
**Science Technology, Science Laboratory Technology**

<b>First Semester</b>		
BIO-101	General Biology I	4
CHM-140	General Chemistry I	3
CHM-141	General Chemistry Laboratory I	1
DFT-107	Drafting I	2
MAT-150	Statistics I	3
WRT-101	English Composition I	3
<b>Total: 16</b>		
<b>Second Semester</b>		
BIO-104	Microbiology	3
CHM-212	Organic and Biochemistry	4
TEC-180	Problem Solving Using Technology	4
WRT-201	English Composition II	3
.....	Humanities Elective *	3
<b>Total: 17</b>		
<b>Third Semester</b>		
ENV-108	Hazardous Waste Site Operations	3
PHY-186	General Physics I	4
TEC-201	Science Laboratory Technology I	4
WEX-101	Dynamics of Health and Fitness	2
.....	Social Science Elective *	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
COM-119	Business and Professional Speaking	3
PHY-286	General Physics II	4
TEC-202	Science Laboratory Technology II	4
TEC-203	Work Based Learning for Science Technologies I	1
.....	Humanities Elective *	3
WEX...	Dynamics of Health and Fitness Experience	1
<b>Total: 16</b>		

**Degree Total Credits: 65**

\*General Education Elective

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: AAS.MUSC.REC.TECH**  
**Degree: AAS**  
**Music, Recording Technology**  
*Pending State approval*

<b>First Semester</b>		
MUS-101	Music Appreciation	3
MUS-103	Fundamentals of Music	3
MUS-119	Songwriting Workshop	2
MUS-131	Class Piano I	2
MUS-151	Introduction to Audio Recording	3
WRT-101	English Composition I	3
<b>Total: 16</b>		
<b>Second Semester</b>		
MUS-150	Introduction to MIDI Sequencing and Synthesis	3
MUS-163	Careers in Music	3
MUS-231	Class Piano II	2
MUS-251	Studio Recording Techniques	3
WRT-201	English Composition II	3
	or	3
WRT-202	Technical Writing	3
MUS...	Music Elective **	3
	or	3
COM...	Mass Communication Elective ***	3
<b>Total: 17</b>		
<b>Third Semester</b>		
MUS-261	Advanced Studio Recording	3
PHY-185	Introduction to Physics	4
MUS...	Music Elective **	3
	or	3
COM...	Mass Communication Elective ***	3
.....	Humanities Elective *	3
.....	Social Sciences Elective *	3
<b>Total: 16</b>		
<b>Fourth Semester</b>		
MUS-262	Concert Promotion and Production	3
MUS-463/4	Co-Op Work Experience [Music]	3-4
.....	General Education Elective *	3
MUS...	Music Elective **	3
	or	3
COM...	Mass Communication Elective ***	3-4
.....	Free Elective	3-4
<b>Total: 15-17</b>		
<b>Degree Total Credits: 64-66</b>		

\* General Education Elective

\*\* Music Electives can be chosen from any Music [MUS] course

\*\*\*Mass Communication electives can be chosen from the following courses: COM-105, COM-106, COM-111, COM-140, COM-205, COM-207

**Code: AAS.MUSC.MUS.BUS**

**Degree: AAS**

**Music, Music Business**

*Pending State approval*

<b>First Semester</b>		
BUS-101	Introduction to Business	3
MUS-152	Introduction to the Music Business	3
MUS-163	Careers in Music	3
WRT-101	English Composition I	3
.....	Humanities Elective *	3
MUS...	Music Elective	2-3

**Total: 17-18**

<b>Second Semester</b>		
COM-101	Mass Media of Communication	3
MUS-252	Music in the Marketplace	3
WRT-201	English Composition II	3
	or	3
WRT-202	Technical Writing	3
.....	Humanities Elective *	3
BUS...	Business Elective	3
	or	3
INF...	Information Technologies Elective	3
	or	3
COM...	Communication Elective	3
MUS...	Music Elective *	3

**Total: 18**

<b>Third Semester</b>		
BUS-105	Business Communications	3
ECO-101	Macroeconomics	3
MUS-262	Concert Promotion and Production	3
MUS...	Music Elective *	3
MAT/CIS	Mathematics or Computer Science Elective	3-4
	or	3-4
.....	Natural Science Elective *	3-4

**Total: 15-16**

<b>Fourth Semester</b>		
ACC-110	Financial Accounting	3
MUS-462	Co-Op Work Experience [Music]	2
BUS...	Business Elective	3
	or	3
INF...	Information Technologies Elective	3
	or	3
COM...	Communication Elective	3
MUS...	Music Elective *	2-3
.....	Free Elective	3
.....	General Education Elective *	3

**Total: 16-17**

**Degree Total Credits: 66-69**

\* General Education Elective

**ONE-YEAR [30-36 CREDIT] ACADEMIC CERTIFICATES****Curriculum Requirements**

<b>Area of Study</b>	<b>Credits</b>	<b>Course Description</b>
Communication	3	WRT-101 English Composition I (3 cr.)
Unassigned General Education Credits	3	To be assigned in accordance with the needs of the program.
Total GE Credits	6	
Other Requirements	24-30	Restricted program requirements, program support requirements, free electives.
Total Credits	30-36	

**Code: CERT.CAD**  
**Degree: Certificate**  
**Computer Aided Drafting [CAD]**

<b>First Semester</b>		
DFT-107	Drafting I	2
DFT-210	Computer Aided Drafting I	3
MFG-122	Machine Tool Principles I	3
WRT-101	English Composition I	3
<b>Total: 11</b>		
<b>Second Semester</b>		
DFT-207	Drafting II	3
DFT-211	Computer Aided Drafting II	5
DFT-208	Engineering Graphics I	3
<b>Total: 11</b>		
<b>Third Semester</b>		
DFT-212	Computer Aided Drafting III	3
DFT-282	Technical Illustration	
	or	3-4
TEC-180	Problem Solving using Technology	
.....	General Education Elective *	3
<b>Total: 9-10</b>		
<b>Degree Total Credits: 31-32</b>		

\*General Education Elective

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.COMP.ANIM****Degree: Certificate****Computer Animation**

This certification program is designed for practicing professionals in this field.

The **Computer Animation** and the **Computer Graphics** certificates are designed for practicing professionals in these fields or for students who have already completed substantial college level work. Entry-level commercial art students should consider one of the Associate of Applied Science art programs. Students may choose only those courses for which prerequisites have been met. Returning professionals may request that prerequisites be waived by submitting a portfolio for review by a member of the art faculty. To request a portfolio review, please contact the Department of Arts and Communications at 201-447-7143. To avoid registration problems, please contact the department prior to registering for classes for which you have not taken the required prerequisites.

**First Semester**

ART-192	Computer 3D Animation I *	3
ART-290	Computer 2D Animation I *	3
WRT-101	English Composition I	3
ART...	Restricted Elective	3
.....	General Education Elective **	3

**Total: 15****Second Semester**

ART-197	Computer Imaging ***	3
ART-291	Computer 2D Animation II *	3
ART-293	Computer 3D Animation II *	3
ART...	Restricted Electives	6
.....	General Education Elective **	3

**Total: 18****Degree Total Credits: 33**

Restricted Electives:

ART-126 Introduction to Computer Graphics \*\*\*

ART-181 Photography I

ART-226 Letterform and Type

ART-260 Graphic Design I

ART-261 Graphic Design II

ART-271 Portfolio Presentation

ART-281 Photography II

ART-287 Computer Layout I \*\*\*

ART-288 Computer Layout II \*\*\*

ART-289 Computer 2D Illustration \*\*\*

ART-298 Interactive Multimedia \*\*\*

\*Course uses custom workstations running Windows XP

\*\*General Education Elective.

\*\*\*Course uses Macintosh computers

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.COMP.GRAPH****Degree: Certificate****Computer Graphics**

This certification program is designed for practicing professionals in this field.

The **Computer Animation** and the **Computer Graphics** certificates are designed for practicing professionals in these fields or for students who have already completed substantial college level work. Entry-level commercial art students should consider one of the Associate of Applied Science art programs. Students may choose only those courses for which prerequisites have been met. Returning professionals may request that prerequisites be waived by submitting a portfolio for review by a member of the art faculty. To request a portfolio review, please contact the Department of Arts and Communications at 201-447-7143. To avoid registration problems, please contact the department prior to registering for classes for which you have not taken the required prerequisites.

<b>First Semester</b>		
ART-189	Computer 2D Illustration *	3
ART-287	Computer Layout I *	3
WRT-101	English Composition I	3
ART...	Restricted Electives	6
<b>Total: 15</b>		
<b>Second Semester</b>		
ART-197	Computer Imaging *	3
ART-288	Computer Layout II *	3
ART...	Restricted Electives	6
.....	General Education Elective **	3
<b>Total: 15</b>		
<b>Degree Total Credits: 30</b>		

Restricted Electives:

ART-126 Introduction to Computer Graphics \*\*\*

ART-181 Photography I

ART-226 Letterform and Type

ART-260 Graphic Design I

ART-261 Graphic Design II

ART-271 Portfolio Presentation

ART-281 Photography II

ART-287 Computer Layout I \*\*\*

ART-288 Computer Layout II \*\*\*

ART-289 Computer 2D Illustration \*\*\*

ART-298 Interactive Multimedia \*\*\*

\*Course uses custom workstations running Windows XP

\*\*General Education Elective.

\*\*\*Course uses Macintosh computers

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.COMP.SCI**  
**Degree: CERT**  
**Computer Science**

<b>First Semester</b>		
CIS-165	Fundamentals of Programming *	3
WRT-101	English Composition I	3
.....	General Education Elective **	3
<b>Total: 9</b>		

<b>Second Semester</b>		
CIS-265	Advanced Programming Concepts	3
CIS-271	Computer Organization and Assembly Language	3
.....	General Education Elective **	3
<b>Total: 9</b>		

<b>Third Semester</b>		
CIS-277	Data Structures and Algorithms	3
MAT/CIS...	Mathematics/Computer Science Elective ***	9
<b>Total: 12</b>		

**Degree Total Credits: 30**

\* By permission of the Department Head or the Computer Science Coordinator, properly prepared students may instead register for CIS-265 and/or CIS-271. Such students will be required to complete an additional 3 to 4 credit elective to be selected from: MAT-250, CIS-266, CIS-278, MAT-280, MAT-281, MAT-282, MAT-286, CIS-287, CIS-288, CIS-289

\*\* General Education Elective - PHR-103 Basic Logic or PHR-203 Intermediate Logic is recommended for the General Education Elective

\*\*\* Mathematics/Computer Science Elective (3-9 cr.) The elective requirement in Computer Science and/or Mathematics must total at least 9 credits to be selected from the following courses: MAT-250, CIS-266, CIS-278, MAT-280, MAT-281, MAT-282, MAT-286, CIS-287, CIS-288, CIS-289

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.COMP.SUPPORT**  
**Degree: CERT**  
**Computer Technical Support**

**First Semester**

INF-101	Introduction to Information Technology	3
INF-108	PC Upgrade, Maintenance and Diagnosis	3
INF-114	Microsoft Office	3
INF-160	Networking Technologies and Data Communications	3
INF-163	Internet Concepts and Applications	3
WRT-101	English Composition I	3

**Total: 18**

**Second Semester**

BUS-101	Introduction to Business	3
INF-253	Technical Communications	3
INF-267	Network Security	3
INF...	Operating System Restricted Elective *	3
.....	General Education Elective **	3

**Total: 15**

**Degree Total Credits: 33**

\* General Education Elective

\*\*Operating System Restricted Elective:

INF-232 Windows Client

INF-235 Advanced PC Upgrade, Maintenance, and Diagnosis

INF-254 Unix for the Network Administrator

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.CULN.ARTS****Degree: CERT****Culinary Arts**

The Culinary Arts Certificate Program is designed to aid those working food service professionals who wish to increase their job value or refresh their culinary preparation and leadership skills. Typically, students do not complete the certificate program in two semesters. In those instances where a student **MUST** complete the curriculum in one year or two successive semesters, the student **MUST** obtain written permission from the Dean to waive or otherwise adjust pre-requisites where indicated.

<b>First Semester</b>		
HRM-102	Food Protection	3
HRM-103	Professional Food Preparation Techniques	3
HRM-106	Menu Planning and Nutrition	1
HRM-108	Computer Applications/Hospitality Industry ***	1
HRM-110	Introduction to Baking	3
WRT-101	English Composition I	3
.....	General Education Elective *	3
<b>Total: 17</b>		

<b>Second Semester</b>		
HRM-202	Quantity Food Production and Service **	3
HRM-206	Commercial Restaurant Operation ***	3
HRM-212	International Cuisine ***	3
HRM-213	Classical Garde-Manger **	3
HRM-220	Advanced Baking Techniques ***	3
.....	General Education Elective *	3
<b>Total: 18</b>		

**Degree Total Credits: 35**

\* General Education Elective

\*\* Class offered only during fall semester

\*\*\* Class offered only during spring semester

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.CULN.SCI****Degree: CERT****Culinary Science**

The Culinary Science Certificate Program is designed to provide those students with the first step to gain the knowledge to work in the food processing industry, universities or the Federal Government to create and improve food products; to develop new or better ways of preserving, processing, packaging, storing and delivering foods; or to engage in basic research, discovering new food sources, analyzing food content, or developing ways to process, preserve, package or store food according to industry and government regulations.

**First Semester**

BIO-104	Microbiology	4
CHM-102	Chemistry in Context	4
CHM-112	College Chemistry	4
HRM-103	Professional Food Preparation Techniques	3
WRT-101	English Composition I	3

**Total: 18****Second Semester**

CHM-212	Organic and Biochemistry	4
HRM-102	Food Protection and Safety	3
HRM-106	Menu Planning and Nutrition	1
HRM-110	Introduction to Baking	3
HRM-212	International Cuisine	3
HRM-213	Classical Garde-Manger *	3

**Total: 17****Degree Total Credits: 35**

\* Class offered only during fall semester

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.DB**  
**Degree: CERT**  
**Database Programming and Administration**

		<b>First Semester</b>	
INF-114	Microsoft Office **		3
		<b>Total: 3</b>	
		<b>Second Semester</b>	
INF-101	Introduction to Information Technology		3
INF-144	Windows Desktop Operations or INF-165		1
INF-160	Networking Technologies & Data Communications		3
INF-217	Database for Applications [Oracle]		3
WRT-101	English Composition I		3
INF...	Programming Language Fundamentals †		3
		<b>Total: 16</b>	
		<b>Third Semester</b>	
INF-218	Database Programming		3
INF-219	Database Administration		3
INF-228	Excel for Problem Solving		1
INF-267	Network Security		3
INF...	Advanced Programming Languages ‡		3
.....	General Education Elective *		3
		<b>Total: 16</b>	

**Degree Total Credits: 35**

\* General Education Elective

\*\* Credit-by-exam tests are available

† Programming Language Electives: Fundamentals

(Part 1 of continuing sequence)

INF-145 Visual Basic Programming

INF-152 C/C++ Programming

INF-153 Java Programming

‡ Programming Language Electives: Advanced

(Part 2 of continuing sequence)

INF-224 Advanced C/C++ Programming

INF-246 Advanced Visual Basic Programming

INF-268 Advanced Java Programming

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.ECOMM.BUS**  
**Degree: Certificate**  
**e-Commerce: Business Emphasis**

<b>First Semester</b>		
BUS-101	Introduction to Business or	3
BUS-170	Small Business Management	
BUS-103	Business Mathematics	3
BUS-105	Business Communications	3
INF-146	Web Development	3
BUS-107	e-Tailing	3
WRT-101	English Composition I	3
<b>Total: 18</b>		

<b>Second Semester</b>		
ACC-101	Accounting I or	3
BUS-205	Entrepreneurship	
BUS-210	e-Marketing	3
BUS-211	Internet Law	3
BUS-271	e-Commerce	3
ECO-101	Macroeconomics	3
INF-163	Internet Concepts and Applications	3
<b>Total: 18</b>		

**Degree Total Credits: 36**

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.ENV.TECH**  
**Degree: CERT**  
**Environmental Technology**

**First Semester**

ENV-108	Hazardous Waste Site Operations	3
ENV-109	Environmental Policy Compliance and Regulation	3
ENV-112	Environmental Health	3
WRT-101	English Composition I	3
.....	General Education Elective *†	3-4

**Total: 15-16**

**Second Semester**

ENV-113	Human Environment	3
ENV-121	Environmental Microbiology	4
TEC-180	Problem Solving Using Technology	4
TEC-190	Intro to Geographic Information Systems (GIS)	3
.....	General Education Elective *‡	3-4

**Total: 17-18**

**Degree Total Credits: 32-34**

\* General Education Elective

† BIO-101 General Biology I is recommended

‡ CHM-100 Introduction to Chemistry is recommended

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.EVENT.PLAN.MGT**  
**Degree: CERT**  
**Event Planning and Management**

**First Semester**

BUS-101	Introduction to Business	3
BUS-103	Business Mathematics	3
BUS-105	Business Communications	3
HRM-101	Introduction to Hospitality Management	3
HRM/BUS-129	Event Planning & Management I	3
WRT-101	English Composition I	3

**Total: 18**

**Second Semester**

ACC-120	Computerized Accounting	3
BUS-170	Small Business Management	3
BUS-233	Business Law	3
HRM-203	Beverage Management	2
HRM/LGL-219	Hospitality Law	3
HRM/BUS-229	Event Planning and Management II	3

**Total: 17**

**Degree Total Credits: 35**

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.EXER.SCI**  
**Degree: CERT**  
**Exercise Science**

**First Semester**

BIO-103	The Human Body	4
BUS-101	Introduction to Business	3
WEX-159	CPR and Emergency First Aid	3
WEX-164	Exercise Science	3
WRT-101	English Composition I	3

**Total: 16****Second Semester**

PSY-101	General Psychology	3
WEX-106	Nutrition for Exercise and Fitness	3
WEX-182	Fitness Measurement	3
WEX-184	Sports Medicine I - Theory and Practice	3

**Total: 12****Degree Total Credits: 28**

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.FLORAL**  
**Degree: CERT**  
**Floral Design**

**First Semester**

HRT-102	Plant Science	4
HRT-115	Floral Design	3
HRT-232	Plant Propagation	4
WRT-101	English Composition I	3
.....	General Education Elective *	3

**Total: 17**

**Second Semester**

HRT-119	Greenhouse Operation and Production	3
HRT-120	Interior Landscaping	3
HRT-234	Commercial Floral Design and Management	4
HRT-462	Co-op Work Experience (Horticulture)	2
.....	Business Elective **	3
.....	General Education Elective *	3

**Total: 18**

**Degree Total Credits: 35**

\* General Education Elective

\*\* Three credits from any course(s) ACC, BUS, or INF

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.GRND.MGT**  
**Degree: CERT**  
**Grounds Management**

**First Semester**

HRT-102	Plant Science	4
HRT-103	Turf and Grounds Management	3
HRT-104	Landscape Plants and Materials I	2
HRT-112	Pests of Ornamental Plants	4
HRT-130	Landscaping Contracting	1
WRT-101	English Composition I	3

**Total: 17****Second Semester**

HRT-124	Irrigation Technology	2
HRT-125	Equipment Management	2
HRT-235	Landscape Site Analysis and Construction	3
HRT-237	Arboriculture/Plant Health Care	3
.....	General Education Elective *	3
.....	Restricted Elective **	2-4

**Total: 15-17****Degree Total Credits: 32-34**

\* General Education Elective

\*\* Restricted Electives: HRT-113, HRT-232, HRT-233

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.HOSP.MGMT****Degree: CERT****Hospitality Management**

The Hospitality Management Certificate Program is designed to aid those working professionals who wish to increase their job value or refresh their leadership skills. Typically, students do not complete the certificate program in two semesters. In those instances where a student **MUST** complete the curriculum in one year or two successive semesters, the student **MUST** obtain written permission from the Dean to waive or otherwise adjust pre-requisites where indicated.

<b>First Semester</b>		
HRM-101	Introduction to Hospitality Management	3
HRM-102	Food Protection	3
HRM-103	Professional Food Preparation Techniques	3
HRM-104	Front Office Procedures **	2
HRM-108	Computer Applications/Hospitality Industry ***	1
WRT-101	English Composition I	3
.....	General Education Elective *	3
<b>Total: 18</b>		

<b>Second Semester</b>		
HRM-201	Food and Beverage Cost Control	1
HRM-203	Beverage Management	2
HRM-204	Food Purchasing	2
HRM-205	Restaurant Service Management	3
HRM-207	Hotel Sales & Convention Planning	1
HRM-214	Banquet & Catering Management	2
HRM-217	Issues in the Hospitality Industry	2
HRM-462	Co-op Work Experience (H/R/H)	2
.....	General Education Elective *	3
<b>Total: 18</b>		

**Degree Total Credits: 36**

\* General Education Elective

\*\* Class only offered during fall semester

\*\*\* Class only offered during spring semester

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.LABOR**  
**Degree: CERT**  
**Labor Studies**

**First Semester**

BUS-101	Introduction to Business *	3
ECO-105	Labor Economics	3
LGL-236	Employment Law **	2
POL-116	Labor Law	3
POL-122	Collective Bargaining	3
WRT-101	English Composition I	3

**Total: 17**

**Second Semester**

BUS-208	Human Resources Management	3
HIS-140	History of the Labor Movement	3
WRT-201	English Composition II	3
.....	Restricted Social Science Elective †	3
.....	Restricted Humanities Elective †	3

**Total: 15**

**Degree Total Credits: 32**

\* Prerequisite of BUS-101 Introduction to Business or BUS-115 Introduction to Nonprofit Organizations or by permission from the Academic Department Chair

\*\* Prerequisite of LGL-101 Fundamentals of Law may be waived by special permission from the Academic Chair of Legal and Related Studies Department [especially for students pursuing the One-Year Certificate in Labor Studies]

† Choose one 3 credit social science course from the following: POL-104, PSY-109, SOC-102, SOC-120, SOC-121, SOC-222 [Prerequisite: SOC-101], ECO-101, ECO-201 [Prerequisite: ECO-101]

‡ Choose one 3 credit humanities or history course from the following: PHR-111, PHR-105, PHR-100, LIT-220 [Prerequisite: WRT-101], LIT-202 [Prerequisite: WRT-101], HIS-111, HIS-112, HIS-113, HIS-114

**Code: CERT.LAND**  
**Degree: CERT**  
**Landscaping**

**First Semester**

BUS-101	Introduction to Business	3
DFT-107	Drafting I	2
HRT-103	Turf and Grounds Management	3
HRT-104	Landscape Plants and Materials I	2
HRT-130	Landscaping Contracting	1
WRT-101	English Composition I	3
HRT...	Restricted HRT Elective **	3-4

**Total: 17-18**

**Second Semester**

HRT-113	Principles of Landscaping	3
HRT-204	Landscape Graphics	2
HRT-233	Landscape Plants and Materials II	4
HRT-235	Landscape Site Analysis and Construction	3
INF-101	Introduction to Information Technology	3
.....	General Education Elective *	3

**Total: 18**

**Degree Total Credits: 35-36**

\* General Education Elective

\*\* Restricted HRT Elective: HRT-101, HRT-102, HRT-112, HRT-120, HRT-236

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.LGN.CON****Degree: CERT****Legal Nurse Consultant**

All applicants to the Bergen Community College Legal Nurse Consultant Program must possess an Associate in Science Degree or a Bachelor of Science Degree from an accredited post-secondary institution, a current state license to practice nursing [RN] and have completed at least 2,000 hours of clinical work as a registered nurse. The Legal Nurse Consultant Program is approved by the American Bar Association.

<b>First Semester</b>		
LGL-101	Fundamentals of Law	3
LGL-103	Legal Research and Writing	3
LGN-105	Principles of Legal Nurse Consulting *	3
WRT-101	English Composition I	3
<b>Total: 12</b>		
<b>Second Semester</b>		
LGL-203	Paralegalism and Legal Procedure	3
LGL-220	Computer Assisted Legal Research	3
LGN-201	Health Law *	3
WRT-201	English Composition II	3
<b>Total: 12</b>		
<b>Third Semester</b>		
LGL-202	New Jersey and Federal Courts *	3
LGL-234	Personal Injury and Product Liability *	3
<b>Total: 6</b>		

**Degree Total Credits: 30**

\* Course may be offered only in the evening and only in either the Spring or Fall semesters

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.MOAA**  
**Degree: Certificate**  
**Medical Office Administrative Assistant**

<b>First Semester</b>		
MOA-140	Medical Terminology	3
MOA-141	Introduction to Medical Assisting	3
MOA-203	Medical Assistant Administrative Procedures I	3
MOA-218	Medical Economics	2
INF-119	Document Processing with Microsoft Word	3
WRT-101	English Composition I	3

**Total: 17**

<b>Second Semester</b>		
MOA-201	Diagnostic and Procedural Coding	4
MOA-204	Medical Assistant Administrative Procedures II	3
PSY-101	General Psychology	3
WEX-159	CPR and Emergency First Aid	3

**Total: 13**

**Degree Total Credits: 30**

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.MUSC.BUS**  
**Degree: CERT**  
**Music Business**

<b>First Semester</b>		
BUS-101	Introduction to Business	3
MUS-152	Introduction to the Music Business	3
MUS-163	Careers in Music	3
WRT-101	English Composition I	3
MUS...	Music Elective	3
<b>Total: 15</b>		
<b>Second Semester</b>		
.....	General Education Elective *	3-4
MUS-252	Music in the Marketplace	3
MUS-262	Concert Promotion and Production	3
BUS...	Business Elective	
	or	
INF...	Information Technologies Elective	3
	or	
COM...	Communication Elective	
.....	Free Elective	3
<b>Total: 15-16</b>		

**Degree Total Credits: 30-31**

\* General Education Elective

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.MUSC.TECH**  
**Degree: CERT**  
**Music Technology**

<b>First Semester</b>		
MUS-103	Fundamentals of Music	3
MUS-131	Class Piano I	2
MUS-151	Introduction to Digital Audio Recording	3
MUS-150	Introduction to MIDI Sequencing & Synthesis	3
WRT-101	English Composition I	3
.....	Free Elective	2-3

**Total: 16-17**

<b>Second Semester</b>		
MUS-231	Class Piano II	2
MUS-251	Studio Recording Techniques	3
MUS-250	Electronic Music Composition	3
MUS...	Music Elective	3
.....	General Education Elective *	3-4

**Total: 14-15**

**Degree Total Credits: 30-32**

\* General Education Elective

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.MUSC.THR****Degree: CERT****Musical Theater**

<b>First Semester</b>		
DAN-102	Ballet	1
DAN-104	Tap Dance	1
MUA-106	Voice I	1
MUS-103	Fundamentals of Music	2
MUS-110	Music, Art and Drama	3
MUS-121	Chorus I	1
MUS-131	Class Piano I	2
THR-110	Basic Acting Techniques	3
WRT-101	English Composition I	3

**Total: 17**

<b>Second Semester</b>		
MUA-246	Voice II	1
MUS/THR-109	History of Musical Theatre	3
MUS-118	Vocal Workshop	2
MUS-134	Ear Training and Musicianship I	2
THR-113	Movement for the Performing Artist	2
THR-114	Audition Techniques	2
.....	General Education Elective *	3
.....	Restricted Elective **	3

**Total: 18****Degree Total Credits: 35**

\* General Education Elective – recommended MUS-101, MUS-107, MUS-108, THR-101, THR-140

\*\* Restricted Music Electives: MUS-231, MUS-255, MUA-104, MUS-120, MUS-140, DAN-103, DAN-105, THR-111, THR-131, THR-210

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.OFF.TECH**  
**Degree: CERT**  
**Office Technology**

		<b>First Semester</b>	
INF-100	Keyboarding I **		3
		<b>Total: 3</b>	
		<b>Second Semester</b>	
BUS-101	Introduction to Business		3
INF-101	Introduction to Information Technology		3
INF-114	Microsoft Office **		3
INF-161	Internet Research and Data Handling		1
WRT-101	English Composition I		3
.....	General Education Elective *		3
		<b>Total: 16</b>	
		<b>Third Semester</b>	
BUS-103	Business Mathematics		3
INF-119	Document Processing with Microsoft Word		3
INF-147	Web Development Using Dreamweaver		3
	or		3
INF-146	Web Development		2
INF-214	Administrative Simulation †		1
INF-228	Excel for Problem Solving		1
INF...	INF Restricted Elective ***		3
		<b>Total: 15</b>	
<b>Degree Total Credits: 34</b>			

\* General Education Elective

\*\* Credit-by-Exam Tests are available

\*\*\* Restricted INF Electives: INF-108, INF-150‡, INF-160, INF-217, INF-253

‡ Class offered only during spring semester

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.PIANO**  
**Degree: CERT**  
**Piano Instruction/Pedagogy**

<b>First Semester</b>		
MUA-104	Piano I	1
MUS-103	Fundamentals of Music	2
MUS-131	Class Piano I	2
MUS-134	Ear Training and Musicianship I	2
MUS-153	Piano Pedagogy I	3
WRT-101	English Composition I	3
.....	General Education Elective *	3
<b>Total: 16</b>		

<b>Second Semester</b>		
MUA-240	Piano II	1
MUS-132	Music Theory I	2
MUS-231	Class Piano II	2
MUS-253	Piano Pedagogy II	3
MUS...	Performance Ensemble **	2
.....	Restricted Elective ***	3-4
.....	General Education Elective *	3
<b>Total: 16-17</b>		

**Degree Total Credits: 32-33**

\* General Education Elective

\*\* Instrumental or vocal ensembles: MUS-121, MUS-125, MUS-140, MUS-246, MUS-247, MUS-248, MUS-255, MUS-256, MUS-257, MUS-258, MUS-259, MUS-260

\*\*\* Restricted Electives: MUA-241, MUA-242, MUS-133, MUS-134, MUS-151, MUS-241, MUS-242

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.RAD.THERAPY****Degree: CERT****Radiation Therapy Technology**

Program Length: 12 months

GPA for admissions eligibility: 2.50

Prerequisite courses: Registered or registry eligible Radiologic Technologies; two biology with labs [BIO-109 and BIO-209]; Intermediate Algebra [MAT-160]; General Physics [PHY-185.] In addition to the above stated requirements, candidates cannot be accepted into the program until at least 2 of the 5 general educational courses have been completed: MAT-180, MAT-250, INF-101, WRT-201, COM-100. Three of the above listed general education courses may be taken concurrent with the program. Successful completion of all 5 courses is required by the American Registry of Radiologic Technologists and the NJ Department of Environmental Protection.

Application Deadline: February 1

Program Admits: Fall semester

Note: Students who are interested in the program should make an appointment to meet with the coordinator regarding admissions.

**First Semester**

RTT-110	Intro to Radiotherapy & Patient Care Management	2
RTT-120	Radiation Therapy Practices I	4
RTT-121	Radiation Therapy Clinical Practicum I	2
RTT-130	Radiation Biology and Safety	3
RTT-150	Principles of Diagnostic Radiation Physics	3
.....	General Education Elective *	3-4

**Total: 17-18****Second Semester**

RTT-200	Survey of Diseases	3
RTT-210	Dosimetry and Treatment Practices	3
RTT-220	Radiation Therapy Practices II	4
RTT-221	Radiation Therapy Clinical Practicum II	2
RTT-230	Advanced Procedures	2
Elective	General Education Elective *	3

**Total: 17****Third Semester**

RTT-222	Radiation Therapy Clinical Practicum III	2
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**Total: 2****Degree Total Credits: 36-37**

\* General Education Elective

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.SM.BUS.MGMT**  
**Degree: Certificate**  
**Small Business Management**

<b>First Semester</b>		
BUS-101	Introduction to Business	3
BUS-103	Business Mathematics	3
BUS-105	Business Communications	3
BUS-170	Small Business Management	3
INF-114	Microsoft Office	3
WRT-101	English Composition I	3

**Total: 18**

<b>Second Semester</b>		
ACC-120	Computerized Accounting	3
BUS-201	Marketing Principles	3
BUS-205	Entrepreneurship	3
BUS-233	Business Law I	3
.....	Restricted Business Elective *	3
ECO-101	Macroeconomics	3

**Total: 18**

**Degree Total Credits: 36**

\* BUS-104, BUS-106, BUS-110, or BUS-271

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.SURG****Degree: CERT****Surgical Technology**

Program Length: 12 months

GPA for admissions eligibility: 2.00

High School prerequisite courses: High school graduate or GED

College substitutions: None

Application Deadline: March 1 of the current year

Program Admits: Fall semester

**First Semester**

BIO-109	Anatomy and Physiology I	4
SUR-101	Principles of Surgical Technology I	6
SUR-102	Surgical Technology Externship I [16 hrs/wk x 15 weeks]	2
SUR-103	Surgical Terminology	1
SUR-104	Microbiological Applications in Surgery	2
WRT-101	English Composition I	3

**Total: 18****Second Semester**

BIO-209	Anatomy and Physiology II	4
SUR-201	Principles of Surgical Technology II	5
SUR-202	Surgical Technology Externship II [24 hrs/wk x 15 weeks]	2
.....	General Education Elective *	3

**Total: 14****Third Semester**

SUR-203	Surgical Technology Externship III [40 hrs/wk x 4 weeks]	1
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**Total: 1****Degree Total Credits: 33**

\* General Education Elective

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.TRAN.LA.GEN****Degree: CERT****Transfer Studies Certificate: Liberal Arts**

To select the best courses for the college the student wishes to transfer to, s/he is advised to speak with a transfer counselor in the Advising Center or the Counseling Center.

**First Semester**

COM-100	Speech Communication	3
WRT-101	English Composition I	3
HIS...	History Elective *†	3
MAT/CIS...	Math/Computer Science Elective *	3
.....	Humanities Elective *†	3
.....	General Education Elective *	3

**Total: 18****Second Semester**

WRT-201	English Composition II	3
HIS...	History Elective *†	3
.....	Social Science Elective *†	3
.....	Natural Sciences Elective *	4
.....	General Education Elective *	3

**Total: 16****Degree Total Credits: 34**

\* Select from courses approved for General Education

† It is recommended you select one Diversity course

Diversity Courses: Choose from the following Humanities or Social Sciences Electives: ANT-101; HIS-105; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-224; LIT-228; PHR-106; PHR-121; PHR-122; PSY-207; SOC-120; SOC-121; SOC-222

**Code: CERT.TRAN.STP.GEN****Degree: CERT****Transfer Studies Certificate: Science, Technology, Professional Studies**

To select the best courses for the college the student wishes to transfer to, s/he is advised to speak with a transfer counselor in the Advising Center or the Counseling Center.

<b>First Semester</b>		
WRT-101	English Composition I	3
.....	Mathematics	
	or	
.....	Computer Science	3-4
	or	
.....	Natural Science Elective *	
.....	Natural Science *†	4
.....	Select from introductory courses required in the proposed major	6
<b>Total: 16-17</b>		

<b>Second Semester</b>		
COM-100	Speech Communication	3
WRT-201	English Composition II	3
.....	Humanities Elective *♦	3
.....	Social Science Elective *♦	3
.....	Select from introductory courses required in the proposed major	6
<b>Total: 18</b>		

**Degree Total Credits: 34-35**

\* General Education Elective

† Choose from Biology, Chemistry, Earth Sciences, or Physics

♦ Diversity Course Recommended in either Humanities or Social Sciences

Diversity Courses: Choose from the following Humanities or Social Sciences Electives: ANT-101; HIS-105; HIS-116; HIS-121; HIS-126; HIS-130; HIS-131; LIT-203; LIT-204; LIT-215; LIT-218; LIT-224; LIT-228; PHR-106; PHR-121; PHR-122; PSY-207; SOC-120; SOC-121; SOC-222.

**Code: CERT.US**  
**Degree: CERT**  
**United States Studies**

<b>First Semester</b>		
COM-100	Speech Communication	3
HIS-111	United States History to Reconstruction	3
POL-101	American Government	3
WRT-101	English Composition I	3
.....	Restricted Elective *	3
<b>Total: 15</b>		

<b>Second Semester</b>		
HIS-112	United States History since Reconstruction	3
LIT-201	American Literature to 1880	3
LIT-202	American Literature 1880 to the Present	3
WRT-201	English Composition II	3
.....	Restricted Elective *	3
<b>Total: 15</b>		

**Degree Total Credits: 30**

\* Restricted Elective: BUS-101, CRJ-101, ECO-101, ECO-201, EDU-101, WEX-101 and WEX-201, HIS-113, HIS-114, HIS-116, HIS-117, HIS-144, LIT-215, COM-101, MUS-110, POL-104, POL-106, PHR-102, PHR-105, PSY-101, PSY-121, PSY-201, SOC-105, SOC-120, SOC-121, SOC-222, THR-101

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: CERT.VAS.TECH****Degree: Certificate****Vascular Technology**

Program Length: 12 months

GPA for admissions eligibility: 2.50

Admissions Requirement: ARDMS Registry Status; applicant must be a graduate of a CAAHEP approved sonography program. Students with a bachelor's degree are eligible.

Application Deadline: February 1

Program Admits: Fall semester

Note: This regional program utilizes clinical education centers throughout the State of New Jersey. Students might be required to travel to distant sites and provide their own transportation.

**First Semester**

BIO-109	Anatomy and Physiology I	4
DMS-116	Intro to Vascular Principles & Instrumentation	2
DMS-117	Introduction to Vascular Imaging	1
MOA-140	Medical Terminology	3
WRT-101	English Composition I	3
.....	General Education Elective *	3

**Total: 16****Second Semester**

BIO-209	Anatomy and Physiology II	4
DMS-231	Essentials in Venous Ultrasound	2
DMS-232	Essentials in Arterial Ultrasound	3
DMS-233	Clinical Experience I	1
.....	General Education Elective *	3

**Total: 13****Summer Session**

DMS-234	Vascular Clinical Seminar	3
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**Total: 3****Degree Total Credits: 32**

\*General Education Elective

**CERTIFICATES OF ACHIEVEMENT**

**Code: COA.ACCT.ASST**  
**Degree: Certificate of Achievement**  
**Accounting Assistant**

		<b>First Semester</b>	
ACC-101	Accounting I		3
ACC-120	Computerized Accounting		3
ACC-140	Federal Income Tax Return Preparation		1
INF-124	Spreadsheet: Excel		1
		<b>Total: 8</b>	
		<b>Second Semester</b>	
ACC-201	Accounting II		3
INF-228	Excel for Problem Solving		1
ACC...	Restricted Elective *		3
		<b>Total: 7</b>	
		<b>Third Semester</b>	
ACC-463	Co-Op Work Experience (Accounting)		
	or		3
ACC-202	Intermediate Accounting I		
		<b>Total: 3</b>	

**Degree Total Credits: 18**

\* Restricted Electives: ACC-107 Federal Taxation or ACC-115 Government and Not-for-Profit Accounting

**Code: COA.BAKING****Degree: Certificate of Achievement****Baking**

The program will serve as the Introduction to Baking in the various management settings available in the Hospitality Industry. Students who earn this Certificate of Achievement will be able to apply the credits earned, if they so choose, to the 36-credit Culinary Arts Certificate Program, and to the proposed AAS Culinary Entrepreneurship Option or any other options available in the Hotel/Restaurant/Hospitality Department.

<b>First Semester</b>		
BUS-101	Introduction to Business	3
HRM-103	Professional Food Preparation Techniques	3
HRM-110	Introduction to Baking	3

**Total: 9**

<b>Second Semester</b>		
BUS-205	Entrepreneurship	3
HRM-102	Food Protection and Safety	3
HRM-220	Advanced Baking Techniques	3

**Total: 9****Degree Total Credits: 18**

Since HRM-103 Professional Food Preparation Techniques is a prerequisite for the 200-level HRM courses and BUS-101 Introduction to Business is a prerequisite for BUS-205, **students WILL NOT complete this program in one semester.**

**Code: COA.BIO.TECH**  
**Degree: Certificate of Achievement**  
**Biotechnology**

<b>First Semester</b>		
BIO-101	General Biology I	4
CHM-140	General Chemistry I	3
CHM-141	General Chemistry Laboratory I	1
<b>Total: 8</b>		

<b>Second Semester</b>		
BIO-210	Introduction to Biotechnology	4
MAT-150	Statistics I	3
<b>Total: 7</b>		

<b>Third Semester</b>		
BIO-211	Introduction to Bioinformatics	3
<b>Total: 3</b>		

**Degree Total Credits: 18**

**Note:** Students enrolled in this program **ARE REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.BUS.PARA.MGMT**

**Degree: Certificate of Achievement**

**Business Paraprofessional Management**

*\*Before entering the COA Business Paraprofessional Management program students must have completed a Certificate of Competency in Educational Support Professional Services [12 credits.]*

<b>First Semester</b>		
BUS-101	Introduction to Business	3
BUS-207	Principles of Management	3
COM-100	Speech Communication	3
INF-101	Introduction to Information Technology	
	or	3
CIS-158	Introduction to Computer Science	
PSY-101	General Psychology	3

**Total: 15**

**Degree Total Credits: 15**

\*Certificate of Competency in Educational Support Professional Services including:

Module 1: Communication

Module 2: Cultural Competence

Module 3: Child Development and Identifying Abuse and Neglect

Module 4: Student and Staff Safety and Health

56 hours of NJEA-approved ESP Career Development Training.

**Code: COA.CARLAD.CDEV**

**Degree: Certificate of Achievement**

**Career Ladder Education/Child Development**

*Before entering into the AAS Degree in Career Ladder Education/Child Development students **must** complete the following Certificate of Achievement at Bergen Community College.*

<b>First Semester</b>		
EDU-120	Early Childhood Education I w/site based lab *	4
EDU-222	Supervised Field Work Experience I	2
EDU-223	Field Work Seminar I	2

**Total: 8**

<b>Second Semester</b>		
EDU-124	Curriculum Materials and Methods	3
EDU-224	Supervised Field Work Experience II	2
EDU-225	Field Work Seminar II	2

**Total: 7**

**Degree Total Credits: 15**

\* Students must enroll in specific Career Ladder Section of EDU-120

**Code: COA.CATER****Degree: Certificate of Achievement****Catering**

This program will serve as the Introduction to Catering in the various food service management settings available in the Hospitality Industry. Students who earn this Certificate of Achievement will be able to apply the credits earned, if they so choose, to the 36-credit Culinary Arts Certificate Program, and to the proposed AAS Culinary Entrepreneurship Option or any other options available in the Hotel/Restaurant/Hospitality Department.

**First Semester**

BUS-101	Introduction to Business	3
HRM-102	Food Protection & Safety	3
HRM-103	Professional Food Preparation Techniques	3

**Total: 9****Second Semester**

BUS-205	Entrepreneurship	3
HRM-106	Menu Planning and Nutrition	1
HRM-213	Classical Garde-Manger	3
HRM-214	Banquet & Catering Management	2

**Total: 9****Degree Total Credits: 18**

Since HRM-103 Professional Food Preparation Techniques is a prerequisite for the two 200-level HRM courses, and BUS-101 Introduction to Business is the prerequisite for BUS-205, **students WILL NOT complete this program in one semester.**

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.CNC.PROG**  
**Degree: Certificate of Achievement**  
**CNC Programming**

<b>First Semester</b>		
MFG-122	Machine Tool Principles I	3
MFG-227	CNC Programming I	4
<b>Total: 7</b>		

<b>Second Semester</b>		
MFG-228	CNC Programming II	3
DFT-107	Drafting I	2
<b>Total: 5</b>		

**Degree Total Credits: 12**

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.ENV**

**Degree: Certificate of Achievement**

**Environmental Technology**

This program is for practicing professionals whose experience in the field has gained them the equivalent of one year of study in a two-year program.

**First Semester**

ENV-108	Hazardous Waste Site Operations	3
ENV-109	Environmental Policy Compliance and Regulation	3

**Total: 6**

**Second Semester**

ENV-121	Environmental Microbiology	4
ENV-122	Environmental Chemistry	4

**Total: 8**

**Degree Total Credits: 14**

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.FINANCE**  
**Degree: Certificate of Achievement**  
**Finance**

<b>First Semester</b>		
ACC-110	Financial Accounting	3
BNF-101	Principles of Banking *	3
BUS-101	Introduction to Business	3

**Total: 9**

<b>Second Semester</b>		
BNF-201	Principles of Finance	3
BNF-202	Asset Management **	3
ECO-101	Macroeconomics	
	or	3
BNF-102	Personal Finance and Money Management	

**Total: 9**

**Degree Total Credits: 18**

\* Class offered only during fall semester

\*\* Class offered only during spring semester

**Code: COA.FIR.SCI**  
**Degree: Certificate of Achievement**  
**Fire Science**

<b>First Semester</b>		
FIR-101	Introduction to Fire Protection *	3
FIR-102	Fundamentals of Fire Prevention/Fire Inspector I **	3
FIR-103	Building Codes and Standards	3
FIR-104	Fire Tactics and Strategy	3
FIR-105	Fire Administration	3

**Total: 15**

**Degree Total Credits: 15**

\*Students with Firefighter I certification will have this course waived and receive 3 credits. Students with Firefighter II certification will have this course waived and receive 4 credits.

\*\*First part of the ninety-hour course required for certification.

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.FORENSIC**  
**Degree: Certificate of Achievement**  
**Forensic Science**

**First Semester**

CHM-100	Introduction to Chemistry	4
CRJ-101	Introduction to Criminal Justice	3
CRJ-108	Topics in Criminal Justice *	3
CRJ-111	Criminal Investigation	3
CRJ-120	Practical Criminal Evidence	3

**Total: 16****Degree Total Credits: 16**

\*Special Topics Course: Introduction to Forensics

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.GIS**  
**Degree: Certificate of Achievement**  
**Geographic Information Systems**

**First Semester**

TEC-190	Introduction to Geographic Information Systems	3
TEC-191	Introduction to Mapping and Cartography	3

**Total: 6**

TEC-292	Introduction to Remote Sensing	3
TEC-293	Advanced Geographic Information Systems	3

**Second Semester**

**Total: 6**

**Degree Total Credits: 12**

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.HOME.SEC**  
**Degree: Certificate of Achievement**  
**Homeland Security**

**First Semester**

CRJ-108	Topics in Criminal Justice	3
HSE-101	Introduction to Homeland Security	3
HSE-102	Introduction to Emergency Management	3
HSE-103	Legal Aspects of Homeland Security & Emergency Mgmt	3
HSE-104	Disaster Management, Risk Assessment & Mitigation	3

**Total: 15**

**Degree Total Credits: 15**

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.HOSP.OPR****Degree: Certificate of Achievement****Hospitality Operations**

This program will serve as the Introduction to Hospitality Operations in the various management settings available in the Hospitality Industry. Students who earn this Certificate of Achievement will be able to apply the credits earned, if they so choose, to the 36-credit Hospitality Management Certificate Program, and to any of the degree curriculum options available in the Hotel/Restaurant/Hospitality Department.

**First Semester**

BUS-101	Introduction to Business	3
HRM-101	Introduction to Hospitality Management	3
HRM-104	Front Office Procedures	2
HRM-108	Computer Applications for the Hospitality Industry	1

**Total: 9****Second Semester**

BUS-205	Entrepreneurship	3
HRM-203	Beverage Management	2
HRM-205	Restaurant Service Management	3
HRM-207	Hotel Sales & Convention Planning	1

**Total: 9****Degree Total Credits: 18**

Since HRM-101 Introduction to Hospitality Management is a prerequisite for all of the HRM 200-level courses, and BUS-101 Introduction to Business is a prerequisite for all of the BUS 200-level courses, **students WILL NOT complete this program in one semester.**

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.LABOR**  
**Degree: Certificate of Achievement**  
**Labor Studies**

*\*\* Prerequisite to Program*

**First Semester**

BUS-101*	Introduction to Business	3
POL-116	Labor Law	3
POL-122	Collective Bargaining	3

**Total: 9**

**Second Semester**

BUS-208	Human Resources Management	3
HIS-140	History of the Labor Movement	3
LGL-236	Employment Law	2

**Total: 8**

**Degree Total Credits: 17**

\* BUS-101 Introduction to Business or BUS-115 Introduction to Nonprofit Organizations or by permission from the Academic Department Chair

\*\* Prerequisite of LGL-101 Fundamentals of Law may be waived by special permission from the Academic Department Chair of Legal and Related Studies Department [especially for students pursuing the Certificate of Achievement in Labor Studies.]

**Code: COA.MACH.TOOL**  
**Degree: Certificate of Achievement**  
**Machine Tooling**

		<b>First Semester</b>	
DFT-107	Drafting I		2
DFT-210	Computer Aided Drafting I		3
MFG-122	Machine Tool Principles I		3
		<b>Total: 8</b>	

		<b>Second Semester</b>	
MFG-119	Pro/Engineer Design I		3
MFG-222	Machine Tool Principles II		3
		<b>Total: 6</b>	

**Degree Total Credits: 14**

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.MFG.PROENG**  
**Degree: Certificate of Achievement**  
**Manufacturing Design using Pro/Engineer®**

		<b>First Semester</b>	
MFG-119	Pro/Engineer Design I		3
		<b>Total: 3</b>	
		<b>Second Semester</b>	
MFG-219	Pro/Engineer Design II		3
		<b>Total: 3</b>	
		<b>Third Semester</b>	
MFG-220	Pro/Engineer Design III		3
		<b>Total: 3</b>	
		<b>Fourth Semester</b>	
MFG-221	Pro/Engineer Design IV		3
		<b>Total: 3</b>	

**Degree Total Credits: 12**

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.MKTG.ASST**  
**Degree: Certificate of Achievement**  
**Marketing Assistant**

<b>First Semester</b>		
BUS-101	Introduction to Business	3
BUS-105	Business Communications	3
PSY-101	General Psychology	3
<b>Total: 9</b>		

<b>Second Semester</b>		
BUS-201	Marketing Principles	3
BUS-210	E-Marketing	3
BUS...	Restricted Elective *	3
<b>Total: 9</b>		

**Degree Total Credits: 18**

\*Restricted Elective: BUS-202 International Marketing; BUS-203 Sports Marketing; BUS-250 Advertising; BUS-463 Co-Op Work Experience [Business Administration] recommended only with a marketing position

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.MUSC.COMM.PROD**  
**Degree: Certificate of Achievement**  
**Commercial Music Production**

**First Semester**

MUS-119	Songwriting Workshop	2
MUS-131	Class Piano I	2
MUS-151	Introduction to Audio Recording	3
MUS-152	Introduction to the Music Business	3

**Total: 10****Second Semester**

MUS-150	Introduction to MIDI Sequencing and Synthesis	3
MUS-231	Class Piano II	2
MUS-251	Studio Recording Techniques	3

**Total: 8****Degree Total Credits: 18**

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.NET.SECURITY**

**Degree: Certificate of Achievement**

**Network Security**

*\*Before entering into the COA, students must have INF-170 Network Experience as a prerequisite for all courses in the program OR a degree in Network Administration.*

<b>First Semester</b>		
INF-267	Network Security	3
INF-270	Computer Crime	3
INF-271	Ethical Hacking	3
INF-272	Windows Active Directory	3
INF-273	Intrusion Detection and Prevention	3
<b>Total: 15</b>		

**Degree Total Credits: 15**

*\*INF-170 Networking Experience, 3 credits - Transfer credit awarded for extensive professional experience. INF faculty recommendation required to obtain credit.*

**Code: COA.NONPRF.MGT**  
**Degree: Certificate of Achievement**  
**Nonprofit Management**

<b>First Semester</b>		
ACC-115	Government and Not-for-Profit Accounting	3
BUS-115	Introduction to Nonprofit Organizations	3
BUS-116	Funding and Grant Management	3
<b>Total: 9</b>		

<b>Second Semester</b>		
BUS-201	Marketing Principles	3
BUS-207	Principles of Management	3
LGL-209	Nonprofit Law	3
<b>Total: 9</b>		

**Degree Total Credits: 18**

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.PRIV.SECURITY**  
**Degree: Certificate of Achievement**  
**Private Security**

<b>First Semester</b>		
CRJ-101	Introduction to Criminal Justice	3
CRJ-111	Criminal Investigation	3
CRJ-112	Crime Prevention	3
CRJ-125	Introduction to Security	3
CRJ-127	Principles of Loss Prevention	3
<b>Total: 15</b>		

**Degree Total Credits: 15**

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.PROF.COOK**  
**Degree: Certificate of Achievement**  
**Professional Cooking**

**First Semester**

HRM-102	Food Protection and Safety	3
HRM-103	Professional Food Preparation Techniques	3
HRM-110	Introduction to Baking	3

**Total: 9****Second Semester**

HRM-212	International Cuisine	3
HRM-213	Classical Garde-Manger *	3
HRM-220	Advanced Baking Techniques **	3

**Total: 9****Degree Total Credits: 18**

\* Offered only in the Fall

\*\*Offered only in the Spring

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.QA**  
**Degree: Certificate of Achievement**  
**Quality Assurance**

<b>First Semester</b>		
TEC-145	Introduction to Quality Control	4
TEC-150	Quality Control in Biotechnology I	3
<b>Total: 7</b>		

<b>Second Semester</b>		
TEC-235	Procedure Writing	4
TEC-240	Quality Control: Microbial Contamination	4
TEC-250	Quality Control in Biotechnology II	3
<b>Total: 11</b>		

**Degree Total Credits: 18**

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.REAL.EST**  
**Degree: Certificate of Achievement**  
**Real Estate**

<b>First Semester</b>		
BUS-101	Introduction to Business	3
REA-101	Principles of Real Estate *	3
<b>Total: 6</b>		
<b>Second Semester**</b>		
REA-202	Zoning, Planning and Land Use	3
REA-203	N.J. Environmental Regulations	3
REA-204	Real Estate Leasing *	2
REA-205	Real Estate Finance	1
<b>Total: 9</b>		

**Degree Total Credits: 15**

\*Holders of current N.J. Sales or Brokers License are exempt from these courses

\*\*Courses in the second semester will be offered in the evening only

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.RETAIL**  
**Degree: Certificate of Achievement**  
**Retailing**

<b>First Semester</b>		
BUS-101	Introduction to Business	3
BUS-102	Retailing	3
BUS-105	Business Communications	3
<b>Total: 9</b>		

<b>Second Semester</b>		
BUS-104	Customer Service	3
BUS-106	Effective Selling	3
BUS-201	Marketing Principles	3
<b>Total: 9</b>		

**Degree Total Credits: 18**

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.SPORTS.MGMT**  
**Degree: Certificate of Achievement**  
**Sports Management**

**First Semester**

BUS-101	Introduction to Business	3
WEX-101	Dynamics of Health and Fitness	2
WEX-126	Sports Administration	3

**Total: 8****Second Semester**

BUS-203	Sports Marketing	3
WEX-127	Intro to Facility and Events	3
WEX-473	Co-Op Work Experience/Sports Management	3

**Total: 9****Degree Total Credits: 17**

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.SPEC.IMAG.RAD**

**Degree: Certificate of Achievement**

**Special Imaging for Radiologic Technologists**

\*This program is for practicing professionals whose experience in the field has gained them the equivalent of one year of study in a two-year program.

**First Semester**

RAD-250	Cross-Sectional Anatomy for Specialty Imaging	4
RAD-251	Computer Tomography	3
RAD-252	Magnetic Resonance Imaging	3

**Total: 10**

**Second Semester**

RAD-253	Magnetic Resonance Imaging Clinical Practicum	1
RAD-254	Computerized Tomography Clinical Practicum	1

**Total: 2**

**Degree Total Credits: 12**

\*All students must be registered/licensed radiographers [RT(R)/LXT] in good standing to enroll in this program.

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.SPORT.MERCH**  
**Degree: Certificate of Achievement**  
**Sports Merchandising**

<b>First Semester</b>		
BUS-101	Introduction to Business	3
BNF-103	Sports Finance	3
BUS-150	Sport and Team Branding	3
<b>Total: 9</b>		

<b>Second Semester</b>		
BUS-203	Sports Marketing	3
BUS-251	Sports Merchandising & Promotion	3
Elective	Restricted Elective *	3
<b>Total: 9</b>		

**Degree Total Credits: 18**

\* Restricted Elective

Select one of the following courses:

BUS-463 Co-Op Work Experience [Business Administration]

PSY-111 Sport Psychology

WEX-127 Introduction to Facility and Events

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

**Code: COA.WELD**  
**Degree: Certificate of Achievement**  
**Welding Technology**

<b>First Semester</b>		
DFT-107	Drafting I	2
MFG-130	Welding Technology I	3
<b>Total: 5</b>		

<b>Second Semester</b>		
MFG-230	Welding Technology II	3
MFG-229	Materials Processing & Fabrication	4
<b>Total: 7</b>		

**Degree Total Credits: 12**

**Note:** Students enrolled in this program **ARE NOT REQUIRED** to successfully complete a course in basic algebra if indicated by Placement Testing.

## ACC - ACCOUNTING

**ACC-100 Introduction to Accounting (3.00 cr.)**

This course explores the need and use of accounting information in the business world, as well as provides an overview of accounting careers. The course is designed to give students a user's perspective of accounting and to provide them with the necessary communication and analytical skills needed to succeed in future accounting courses. Lecture (2.00), Laboratory (2.00).

**ACC-101 Accounting I (3.00 cr.)**

This course introduces the student to the accounting principles and accounting cycle of proprietorships. Topics considered financial statement preparation, inventories, receivables, payables, plant assets, accruals, deferrals, accounting systems, and cash control. AS Transfer Degree students should take ACC-110. Lecture (2.00), Laboratory (2.00).

**ACC-107 Federal Taxation (3.00 cr.)**

This course reviews the history and background of federal taxation. Students learn the tax definitions of gross income, deductions, and gains and losses, and they examine accounting methods approved by the IRS. The preparation of federal income tax returns is also covered. Lecture (2.00), Laboratory (2.00).

**ACC-110 Financial Accounting (3.00 cr.)**

This course is an introduction to the theory of accounting and the procedures necessary to produce financial statements. This course focuses on the classification, valuation, and communication of financial information. An emphasis will be placed on the usefulness of financial accounting concepts. AAS Career Program students should take ACC-101. Lecture (2.00), Laboratory (2.00).

**ACC-115 Government and Not-for-Profit Accounting (3.00 cr.)**

This course provides the student with the foundations of accounting for governmental and not-for-profit organizations. It introduces students to accounting standards and those applications germane to governmental and not-for-profit entities. Emphasis is placed on Fundamentals accounting, budgeting, financial reporting, and accounting procedures. Lecture (2.00), Laboratory (2.00).

**ACC-120 Computer Accounting (3.00 cr.)**

This course provides the student with the skills necessary to use popular computerized accounting packages such as QuickBooks or Peachtree for Windows. The student will obtain a theoretical accounting background. The student, using basic accounting concepts, prepares and analyzes various accounting documents, reports, and statements. It is recommended that this course be taken concurrently with ACC-101 Accounting I. Lecture (2.00), Laboratory (2.00).

**ACC-140 Federal Income Tax Prep (1.00 cr.)**

This course will enable average taxpayers to complete their federal income tax returns using tax software. Topics include filing status, gross income, itemized deductions, and tax credits. Laboratory (2.00).

**ACC-201 Accounting II (3.00 cr.)**

This course extends the accounting principles learned in Accounting I to financial and managerial areas of corporations. Areas discussed are liabilities, statement of cash flows, financial statement analysis and interpretation, manufacturing operations, and budgeting. AS Transfer Degree students should take ACC-210. Lecture (2.00), Laboratory (2.00). Prerequisite: ACC-101.

**ACC-202 Intermediate Accounting I (3.00 cr.)**

This course is an in-depth study of accounting principles and their application to the preparation of financial statements. Students participate in a detailed study of current assets and current liabilities. The analysis and preparation of cash flow statement is also taught. Lecture (2.00), Laboratory (2.00). Prerequisite: ACC-201 or ACC-210; minimum grade C.

**ACC-203 Intermediate Accounting II (3.00 cr.)**

This course is an in-depth study of accounting principles as they relate to non-current assets, long-term liabilities, paid-in capital, retained earnings, accounting changes, and error analysis. Earnings per share and financial

statement analysis are also covered in this course. Lecture (2.00), Laboratory (2.00). Prerequisite: ACC-202.

**ACC-206 Hospitality Accounting (3.00 cr.)**

This course is an introduction to basic accounting principles and procedures, which includes the preparation of financial statements, specifically designed for the hospitality industry. Lecture (2.00), Laboratory (2.00). Prerequisite: HRM-101.

**ACC-210 Managerial Accounting (3.00 cr.)**

This course explores accounting information as a tool used in decision making by management. Emphasis will be placed on cost behaviors as they relate to the planning, control and evaluation of a business entity. AAS Career Program students should take ACC-201. Lecture (2.00), Laboratory (2.00). Prerequisite: ACC-110.

**ACC-215 Topics in Accounting (3.00 cr.)**

This course is a study of current issues in the accounting profession and specialized areas of accounting. Topics will be varied and based upon an examination of recent cases and issues. Coverage will include new developments in accounting theory and practice and the pronouncements of various accounting bodies. The student will examine individual topics in greater depth than possible in traditional accounting courses. This course is not intended for students enrolled in an A.S. transfer program. Lecture (2.00), Laboratory (2.00). Prerequisite: ACC-202.

**ACC-462 Co-Op Work Experience (Accounting) (2.00 cr.)**

This course requires part-time student employment in a business organization in order to permit the student to gain knowledge of practices. Co-Op job placement assistance is available through the Co-Op office. 179 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (12.00). Prerequisite: ACC-201 or ACC-210.

**ACC-463 Co-Op Work Experience (Accounting) (3.00 cr.)**

This course provides the student with practical, supervised experience in accounting. Through on-the-job experience, students acquire some of the practical expertise and knowledge needed to pursue a career in these fields. Students are supervised by a faculty member and job placement assistance is available through the Co-Op Office. 225 minimum hours experience distributed over the semester. Lecture (1.00), Cooperative (12.00). Prerequisite: ACC-201 or ACC-210.

## ALP – AMERICAN LANGUAGE PROGRAM

**ALP-004 American Language Foundations Grammar A (3.00 cr.)**

This course is a course for international students with little or no exposure to English. It introduces students to the most basic grammar of English with emphasis on the simplest tenses, structures, and forms. Lecture (3.00).

**ALP-005 American Language Foundations Grammar B (3.00 cr.)**

This course provides students with continued work on the most basic structures of English. Lecture (3.00).

**ALP-006 American Language Foundations Reading (3.00 cr.)**

This course is a course for international students with little or no exposure to English. It provides them with instruction in pronouncing written words and understanding simple written texts. It also introduces students to the most common vocabulary of English and develops their ability to use this vocabulary in basic structures. Lecture (3.00).

**ALP-007 American Language Foundations Writing (3.00 cr.)**

This course is a course for international students with little or no exposure to English. It provides students with instruction in the spelling of English and in writing simple sentences using the structures and vocabulary learned in American Language Foundations: Grammar and Reading. Lecture (3.00).

**ALP-041 American Language I: Grammar A (3.00 cr.)**

This course introduces students to the basic grammar of the English simple sentence, with emphasis on verb tenses. Lecture (3.00). Prerequisites: ALP-004, ALP-005.

**ALP-042 American Language I: Grammar B (3.00 cr.)**

This course provides students with continued work on the basic grammar of the English simple sentence, with emphasis on nouns, adjectives, and adverbs. Lecture (3.00). Prerequisites: ALP-004, ALP-005.

**ALP-043 American Language I: Writing (3.00 cr.)**

This course provides students with carefully guided exercises in the writing of English sentences and paragraphs. Lecture (3.00). Prerequisites: ALP-004, ALP-005, ALP-007.

**ALP-044 American Language I: Reading (3.00 cr.)**

This course helps students with their vocabulary development and gives them practice in reading for comprehension with material to the 1,000-word vocabulary level. Lecture (3.00). Prerequisites: ALP-004, ALP-005, ALP-006.

**ALP-051 American Language II: Grammar A (3.00 cr.)**

This course continues the study of the English simple sentence begun in American Language I and introduces the compound sentence. The emphasis is on infinitives, modal verbs, and adverbs, and students are introduced to dependent clauses. Lecture (3.00). Prerequisites: ALP-006, ALP-007, ALP-041, ALP-042.

**ALP-052 American Language II: Grammar B (3.00 cr.)**

**This course gives students' work on perfect tenses and compound sentences,** provides an introduction to the passive voice and to participial forms, and continues the study of dependent clauses. Lecture (3.00). Prerequisites: ALP-006, ALP-007, ALP-041, and ALP-042.

**ALP-053 American Language II: Writing (3.00 cr.)**

This course gives students' work on both guided and free writing exercises at the paragraph level. Lecture (3.00). Prerequisites: ALP-041, ALP-042, and ALP-043.

**ALP-054 American Language II: Reading (3.00 cr.)**

This course emphasizes reading for content and helps students develop their inferential skills on reading material up to the 3,000-word vocabulary level. Lecture (3.00). Prerequisites: ALP-041, ALP-042, ALP-044.

**ALP-055 Direct Studies American Language II (1.00 cr.)**

This course is for students in the American Language Program who need intensive, supplemental instruction in grammar and writing skills. This computer-assisted learning program is provided on an individual, prescriptive basis. Lecture (1.00).

**ALP-061 American Language III: Grammar A (3.00 cr.)**

This course completes the study of the passive voice, of modal verbs, and compound sentences and begins a complete survey of dependent clauses in the English sentence. Lecture (3.00). Prerequisites: ALP-043, ALP-044, ALP-051, ALP-052.

**ALP-062 American Language III: Grammar B (3.00 cr.)**

This course completes the study of all the phrasal and clausal structures normally used in English sentences. Lecture (3.00). Prerequisites: ALP-043, ALP-044, ALP-051, ALP-052.

**ALP-063 American Language III: Writing (3.00 cr.)**

This course provides students with intensive practice in the writing of paragraphs and provides a transition to college-level with an introduction to the essay. Lecture (3.00). Prerequisites: ALP-051, ALP-052, ALP-053.

**ALP-064 American Language III: Reading (3.00 cr.)**

This course emphasizes reading for content, making inferences, distinguishing main and subordinate points, and evaluating the ideas and presentation of reading material at and beyond the 4,000-word vocabulary level. Lecture (3.00). Prerequisites: ALP-051, ALP-052, ALP-054.

**ALP-065 Direct Studies American Language III (1.00 cr.)**

This course is for students in the American Language Program who need intensive, supplemental instruction in grammar and writing skills. This computer-assisted learning program is provided on an individual, prescriptive basis. Lecture (1.00).

**ANT – ANTHROPOLOGY****ANT-100 Introduction to Anthropology (3.00 cr.)**

This course offers a comprehensive approach to the study of cultural diversity. The course introduces students to the four fields of anthropology: socio/cultural anthropology, archaeology, linguistics, and physical/biological anthropology. Introduction to Anthropology emphasizes behaviors, similarities and differences in adaptations, and variations in current and

past human populations. >General Education Course. >Diversity Course. Lecture (3.00).

**ANT-101 Cultural Anthropology (3.00 cr.)**

This course is a comparative study of human cultures. Attention is given to the various ways in which people cope with their natural settings and their social environments and to the ways in which customs are learned and handed down from one generation to the next. Topics of discussion include the family, social change, religion and magic, economic and political systems, the arts, and urban anthropology. >General Education Course. >Diversity Course. Lecture (3.00).

**ANT-102 Introduction to Archaeology (3.00 cr.)**

This course will study past human cultures and societies as evidenced by material remains. This course provides information on the basic theories, methods, and techniques used in archaeology. Important topics include archaeological survey and excavation, artifact analysis, dating techniques, conservation and display of artifacts, dietary reconstruction, the analysis of prehistoric social and political organization, and the evolution of cities and ancient civilizations. Lecture (3.00).

**ANT-103 Anthropology of the Middle East (3.00 cr.)**

This course is an introduction to the anthropological literature on peoples and cultures of the Middle East. Some of the major themes examined include kinship, marriage, ethnic and religious minority groups, Islam, gender, mass media, nationalism, and politics. Special attention will be paid to the effects of the colonial period and modernization and to the increased economic and strategic significance of this region to the Western World. Lecture (3.00).

**ART**

\* Macintosh computers are used in these courses

\*\* Customer workstations running Windows XP are used in these courses.

**ART-101 Introduction to Art and Visual Culture (3.00 cr.)**

This course trains students in the analysis of images and aesthetic objects and considers issues regarding art production, viewer response, and art in society. A spectrum of fine art, decorative arts, and commercial design from diverse cultures is presented in a non-chronological format through illustrated lectures, discussions, and independent visits to exhibitions. Techniques of and thematic analysis are applied to exemplary works from world cultural history and contemporary life. >General Education Course. Lecture (3.00).

**ART-102 History of Introduction to Art and Visual Culture to 1400 (3.00 cr.)**

This course is a chronological survey of art and visual culture, western and non-western, from the Mesopotamian period through Middle Ages. In a lecture and discussion format, selected works of sculpture, architecture, and painting, as well as decorative utilitarian objects made by peoples in Europe, the Middle East, India, Asia, and Africa are studied for both their styles and materials and their relation to politics, religion and patronage. >General Education Course. Lecture (3.00).

**ART-103 History of Introduction to Art and Visual Culture 1400-1900 (3.00 cr.)**

This course is a chronological survey of art and visual culture, western, and non-western. Selected works of painting, sculpture, architecture, drawing, printmaking, and decorative utilitarian objects made by peoples in Europe (Renaissance to Post-Impressionism), Asia, North and South America, India and Africa are studied for their styles, materials, and techniques and their relation to history, society, religion, patronage, politics and modernity. >General Education Course. Lecture (3.00).

**ART-104 Modern Art 1890-1940 (3.00 cr.)**

This course is a class recommended for both fine and commercial artists as well as the general public interested in how art evolved into the contemporary, experimental forms of expression. Topics to be covered include The Fauves and Expressionism, Cubism and Abstract Art, Constructivism, Dada and Surrealism, Abstract Expressionism, Op and Pop Art, Earth Art and Site Art, Conceptual and Performance Art. >General Education Course. Lecture (3.00).

**ART-105 History of Animation (3.00 cr.)**

This course focuses on the history and development of animation as an art form, with particular attention to works of significant innovation and expression. Topics include the earliest cinematic practices; the first animated films, 1898-1928; sociological trends such as censorship and blacklisting of American animators; Japanese animation; the commerce of animation, including discussion of the studio system; involvement of the avant-garde with animation; animation from Europe; and the development of computer animation techniques. Lecture (3.00).

**ART-107 History of Photography (3.00 cr.)**

This course is a chronological survey of the aesthetic, historical and technical development of still photography as a major medium of artistic expression from its invention in the early 19th century to its present prominence in contemporary art. >General Education Course. Lecture (3.00).

**ART-110 Contemporary Art 1940-Present (3.00 cr.)**

This course is a chronological survey of the expansion of forms, media, issues, and participants in the art made in industrial nations since World War II. Selected works of painting, sculpture, photography, architecture, performance, and video are examined as stylistic and historical objects addressing art history and theory, popular culture, politics, gender, race, and a truly global culture. >General Education Course. Lecture (3.00).

**ART-122 Two-Dimensional Design (3.00 cr.)**

This course is an introduction to the studio skills, concepts, and language applicable to the problems of two-dimensional design as related to the visual arts. Lecture (2.00), Laboratory (2.00).

**ART-123 Life Drawing I (3.00 cr.)**

This course is an intensive study of the anatomy and structure of the human figure as rendered in pencil, brush, charcoal, and ink. Emphasis is placed upon line perspective, form, value, and space relationships. Lecture (2.00), Laboratory (2.00).

**ART-124 Drawing Fundamentals (3.00 cr.)**

This course teaches free and schematic drawing skills necessary for advanced studio applications in the visual arts. Lecture (2.00), Laboratory (2.00).

**\*ART-126 Introduction Computer Graphic (3.00 cr.)**

This course is a class in the use of the computer as a visual tool. Emphasis is placed on creative visual output. No knowledge of mathematics or programming is required. Lecture (2.00), Laboratory (2.00).

**ART-127 Painting I (3.00 cr.)**

This course is an introduction to the techniques and aesthetic considerations of painting. The thread of study is two-fold: a traditional oil painting: formal, academic study of structure, spatial relationships, value, composition, color, temperature, and texture; b. contemporary: unique, creative expression in oil and/or other media in pursuit of contemporary approaches grounded in sound design and concept. In both threads, student painting may include portraiture/life model, still life, interiors/exterior, landscapes, and/or non-objective. Lecture (2.00), Laboratory (2.00).

**ART-181 Photography I (3.00 cr.)**

This course introduces camera handling and basic black and white darkroom techniques. Topics covered include camera operations, principles of exposures, basic understanding of light, film development, printing, picture content and compositional design. Technical and aesthetic possibilities of photography are explored through hands-on visual shooting assignments, photo exhibitions, slide presentations and critiques. A 35mm SLR camera with manual override is required. Lecture (2.00), Laboratory (2.00).

**ART-184 Digital Photography (3.00 cr.)**

This course is designed for students with a basic understanding of computer graphics to gain knowledge of digital photography and photographic manipulation. Students will create art using a variety of photographic processes. Through hands-on assignments, slide presentations, critiques, readings, and exhibitions, students will engage with and build upon the artistic and technical possibilities created by extending photography into the digital realm. Digital cameras, scanners, printers, and

computers will be available for classroom use. Lecture (2.00), Laboratory (2.00).

**\*ART-189 Computer 2D Illustration (3.00 cr.)**

This course explores the essential techniques for creating two-dimensional illustrations, logos and charts using the drawing tools and functions. This course emphasizes the basic operations and functions of object-oriented computer graphics using both spot and process color on the computer. Lecture (2.00), Laboratory (2.00).

**\*\*ART-192 Computer 3D Animation I (3.00 cr.)**

This course concentrates on the use of state-of-the-art 3D animation software. Students become familiar with animation in a 3D environment using proper lighting, camera setup, design and rendering capabilities. Recording peripherals are also introduced. Class discussion and direct application of techniques focus on the use of desktop animation workstations in today's working environment. Lecture (2.00), Laboratory (2.00).

**\*ART-197 Computer Imaging (3.00 cr.)**

This course teaches the basic principles of digital image processing and manipulation, including scanning, editing, color correction, color separations, special effects and transformation techniques. This course emphasizes the methods used to scan images from photographs, to retouch and alter these images, and to create bit-mapped 2.00).

**ART-223 Life Drawing II (3.00 cr.)**

This course further advances the study of the human figure by refining the studio skills and ideas explored in Life Drawing I. Lecture (2.00), Laboratory (2.00). Prerequisite: ART-123.

**ART-226 Letterform and Type (3.00 cr.)**

This course is the study of typographic design, history, and function, and appropriate usage. Lecture (2.00), Laboratory (2.00). Prerequisite: ART-122.

**ART-228 Painting II (3.00 cr.)**

This course continues the studio practice introduced in ART-127 in which students explore and develop technical and aesthetic considerations in painting. The thread of study is two-fold: a. traditional, academic study in oil painting; and b. contemporary painting experimentation and exploration in oil and/or other media. As in ART-127, student painting may include portraiture/life model, still life, interiors/exterior, landscapes, and/or non-objective work. Lecture (2.00), Laboratory (2.00). Prerequisite: ART-127.

**ART-229 Painting III (3.00 cr.)**

This course continues the studio experience introduced in ART-127 and further explored in ART-228. Students develop more advanced technical competencies, and more refined personal, aesthetic considerations, than in the previous two courses. The thread of study is two-fold: a. traditional, academic study in oil painting; and b. contemporary painting experimentation and exploration in oil and/or other media. Student painting may include portraiture/life model, still life, interiors/exterior, landscapes, and/or non-objective work. Lecture (2.00), Laboratory (2.00). Prerequisite: ART-228.

**ART-230 Painting IV (3.00 cr.)**

This course furthers the studio experience of the previous courses. The thread of study is two-fold: a. traditional, academic study in oil painting; and b. contemporary experimentation and exploration in oil and/or other media. In this advanced course, students work toward greater technical competency than achieved in ART-229 and an increasingly refined personal aesthetic that both their work and a written statement. Painting may include portraiture/life model, still life, interiors/exterior, scapes, and/or non-objective work. Lecture (2.00), Laboratory (2.00). Prerequisite: ART-229.

**ART-259 Computer Graphics Web Developer (3.00 cr.)**

This course is an introduction to select software packages that increase a Web developer's ability to refine electronic images and text. Areas covered include aesthetic application; creating graphics using basic bitmap editing and vector based illustration; optimizing graphics in JPEG and GIF formats; using fonts; working with animations and video for the Web utilizing GIF, QuickTime and Flash animations; and troubleshooting technical problems. Lecture (2.00), Laboratory (2.00). Prerequisite: ART-189 or ART-197.

**ART-260 Graphic Design I (3.00 cr.)**

This course enables students to develop proficiency in the graphic communication processes. Emphasis is on creative design solutions for commercial art problems. Students apply their knowledge in preparing graphics for publication and sales promotion. Lecture (2.00), Laboratory (2.00). Prerequisite: ART-226.

**ART-261 Graphic Design II (3.00 cr.)**

This course is a continuation of the problem solving approach to design previously explored in Graphic Design I. Lecture (2.00), Laboratory (2.00). Prerequisites: ART-260 and ART-287.

**ART-271 Portfolio Presentation (2.00 cr.)**

This course is a class in the selection, arrangement and presentation of visual communication material. From designing a how to get your foot in the door resume/cover letter to a how-to in visual arts business practices. This class is necessary for freelancers and transfer/graduate aspirants alike. Topics covered include current portfolio and presentation types, interview techniques, writing resume and cover letters, how artwork is priced, business and legal practices for commissioned artwork, employment issues, salaries and freelance prices. Lecture (1.00), Laboratory (2.00). Prerequisites: ART-122, ART-189, and ART-197, and any 3 courses from ART-260, ART-226, ART-287, ART-127, ART-192, ART-290, MUS-151 or ART-298.

**ART-281 Photography II (3.00 cr.)**

This course refines and further explores techniques and ideas presented in Photography I. Emphasis is on the relationship between exposure, film development and the finished print. Course work focuses on enhanced darkroom skills and experimentation with toners, different photographic papers, advanced lighting situations, and exposure techniques. A 35mm SLR camera with manual override is required. Lecture (2.00), Laboratory (2.00). Prerequisite: ART-181.

**\*ART-287 Computer Layout I (3.00 cr.)**

This course is designed for students knowledgeable in typography wishing to expand their skills in a hands-on creative manner. Students design and set type for advertising, publishing and corporate business problems. Lecture (2.00), Laboratory (2.00). Prerequisite: ART-226 and (ART-189 or ART-197.)

**\*ART-288 Computer Layout II (3.00 cr.)**

This is a course that trains persons familiar with traditional layout procedures in the computer and its applications. This advanced class stresses the combining of computer-set type with visuals for brochures, magazines, newspapers and other media. Lecture (2.00), Laboratory (2.00). Prerequisite: ART-287 and (ART-189 or ART-197.)

**\*\*ART-290 Computer 2D Animation I (3.00 cr.)**

This course introduces the fundamental skills and concepts of 2D computer animation, motion graphics, and digital video. The focus is twofold: technical and aesthetic. Technical study is comprehensive, from operating systems and software interface, to audio/video capture, to special effects, editing, and output. Aesthetic issues emphasize innovative approaches to sequential organization of thematic materials. Lecture (2.00), Laboratory (2.00). Prerequisite: ART-189 or ART-197.

**\*\*ART-291 Computer 2D Animation II (3.00 cr.)**

This course is an advanced level studio experience in computer animation design and production. Technical and aesthetic issues in masking, key framing, interlacing, and compression are explored. Students learn to incorporate illustrations, photographs, video, and audio into their animations, as works progress from storyboard to completion. For students familiar with 3D animation techniques explored in ART-192 and/or ART-293, the possibilities for incorporating 3D animations into their projects are presented. Lecture (2.00), Laboratory (2.00). Prerequisite: ART-290.

**\*\*ART-293 Computer 3D Animation II (3.00 cr.)**

This course continues the study of state-of-the-art 3D animation, while concentrating on advanced technique and the integration of other computer graphic hardware/software in producing student work. Course work emphasizes the development of realistic and/or stylized visuals, as well as eye-catching special effects. Demo reels and business practices are included in the class work and discussion. Lecture (2.00), Laboratory (2.00). Prerequisite: ART-192.

**\*ART-298 Interact Multimedia (3.00 cr.)**

This course teaches the principles of building illustrations and photographs into time-based computer visuals with sound. Students will create, assemble, and animate interactive media for distribution on CD-ROM and the Web. Lecture (2.00), Laboratory (2.00). Prerequisite: ART-189 or ART-197.

**ART-462 Co-Op Work Experience (Commercial Art) (2.00 cr.)**

This course places students as assistants in commercial art establishments. Students must work a minimum number of hours for the semester and will also attend a weekly one-hour seminar at Bergen. Student's work experiences are supervised by Bergen faculty members. Co-Op job-placement assistance is available through the Co-Op office. 1 lecture, plus 120 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (8.00). Prerequisite: ART-260.

**ART-463 Co-Op Work Experience (Commercial Art) (3.00 cr.)**

This course places students as assistants in commercial art establishments. Students must work a minimum number of hours for the semester and will also attend a weekly one-hour seminar at Bergen. Student's work experiences are supervised by Bergen faculty members. Co-Op job-placement assistance is available through the Co-Op office. 1 lecture, plus 180 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (12.00). Prerequisite: ART-260.

**AVT – AVIATION TECHNOLOGY****AVT-100 Introduction to Aeronautics (3.00 cr.)**

This course is a study of the science, theory, and practice of designing, building, and operating aircraft. Topics considered include a brief history of the evolution of aviation and aircraft, basic aircraft design and flight controls, aircraft systems, navigation, air law, airport operations, and weather. Aeronautical decision-making, concept application, and practical applications will be stressed. Lecture (3.00).

**BIO – BIOLOGICAL SCIENCES****BIO-101 General Biology I (4.00 cr.)**

This is the first course in a two-semester sequence in general biology. It is designed to explain the fundamental principles of biology and to promote an awareness of their significance to society. Lecture topics include Introduction to Biology, review of basic chemistry, cell biology, genetics, and a survey of Kingdoms Monera, Protista, and Fungi. Laboratory exercises develop proficiency in the use of laboratory equipment and guide students in investigations of cell biology, genetics, and microbiology. >General Education Course. Lecture (3.00), Laboratory (3.00).

**BIO-103 The Human Body (4.00 cr.)**

This is a one-semester course that is concerned with basic chemistry, the human cell, tissues, and the musculoskeletal, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems. The course includes a survey of metabolism and fluid/electrolyte balance. Lectures are supplemented by writing assignments and discussions. Laboratory exercises include microscopy, dissection, and anatomical and physiological experiments that complement the lecture. >General Education Course. Lecture (3.00), Laboratory (3.00).

**BIO-104 Microbiology (4.00 cr.)**

This is a laboratory science course that emphasizes the principles of biology as they apply to microorganisms. The morphology, anatomy, physiology, growth, metabolism, nutrition, control, and identification of the various microbes, genetics including recombination technology, industrial and clinical case studies in microbiology are discussed. Representative laboratory exercises include staining procedures, media preparation, pure culture techniques, culture identification, and serology. >General Education Course. Lecture (3.00), Laboratory (3.00).

**BIO-107 Introduction to Human Biology (4.00 cr.)**

This course is a human anatomy and physiology course intended for the non-biology major. Biological principles are taught by examining human body systems, homeostasis, and disease. This information, relevant because it applies to their own bodies, will help students understand medical issues, appreciate the importance of exercise and nutrition in maintaining health, and consider environmental concerns including the health effects of pollution and overpopulation. Laboratory exercises include

microscopy and dissection. >General Education Course. Lecture (3.00), Laboratory (3.00).

**BIO-108 Introduction Environmental Biology (4.00 cr.)**

This course deals with humans and their interactions with the environment. Topics covered include fundamental aquatic and terrestrial ecology, air and water pollution, world population problems, loss of biodiversity, pesticides, solid waste problems and an extensive review of energy problems and their solutions. Laboratories include measurements of various environmental pollutants, analysis of environmental parameters and descriptive and practical reinforcement of lecture material. >General Education Course Lecture (3.00), Laboratory (3.00).

**BIO-109 Anatomy and Physiology I (4.00 cr.)**

This course is an introduction to the basic principles of human anatomy and physiology that emphasizes some common diseases in relation to the various body systems. Among the topics considered are the basic plan of the body, tissues, the skeletal system, the muscular system, articulations, cardiovascular system, and the respiratory system. Lectures are supplemented by writing assignments, discussion, and laboratory sessions that include dissection and elementary physiology experiments. >General Education Course. Lecture (3.00), Laboratory (3.00).

**BIO-115 Vertebrate Anatomy and Physiology I (4.00 cr.)**

This course focuses on the structures and functions of vertebrate organ systems, with primary emphasis on mammals. After a brief overview of vertebrate development and evolutionary history, the major portion of the course reviews each system, across all principal groups. Study of basic cellular biology and of skeletal, muscle, and nervous systems are included. Normal homeostatic mechanisms and pathophysiological conditions are emphasized, as well as the interrelationships of organs and organ systems. Dissection is required. Lecture (3.00), Laboratory (3.00).

**BIO-119 Intense Wolf Study (3.00 cr.)**

This course deals with an organism that represents the conflicts between humans and wildlife management issues. Taught at the International Wolf Center in Ely, Minnesota, during the winter semester break, students will study captive wolves as well as wolves in their natural habitat. Lecture topics include the biology and ecology of the gray wolf, *Canis lupus*. Afternoon and evening sessions involve fieldwork and independent study. Lecture (1.00), Laboratory (6.00).

**BIO-130 People-Plant Relationships (4.00 cr.)**

This course explores the effects of plants on biological organisms that influence human economic, social and psychological behavior. The course will focus on two major themes: 1) plants as sources of food, shelter, clothing, drugs, and industrial raw material; and 2) the influence of plant life on human cultural diversity, biotechnology, medicine, and conservation efforts. >General Education Course. Lecture (3.00), Laboratory (3.00).

**BIO-131 General Botany (4.00 cr.)**

This course is an introduction to the biology of plants. The course includes an analysis of plant structure and function, an explanation of the principles of plant genetics, an exploration of plant evolution, and an examination of plant ecology. The importance of plants to people will be illustrated through discussions of people's ecological and economic dependence upon plants. The course content will be presented through lectures, demonstrations, and laboratory exercises. >General Education Course. Lecture (3.00), Laboratory (3.00).

**BIO-201 Comparative Anatomy (4.00 cr.)**

This course is a study of the body structures of some representative vertebrate animals and of their functional and evolutionary relationships. Laboratory exercises include detailed dissection of the lamprey eel, the dogfish, the mudpuppy, the cat, and other animals. Lecture (3.00), Laboratory (3.00). Prerequisites: BIO-101 and BIO-203.

**BIO-202 Embryology (4.00 cr.)**

This course is the study of vertebrate embryonic development from gametogenesis and fertilization to the development of the body organs. Laboratory exercises include experiments with living sea urchins, Japanese medaka fish, frogs, and chick embryos, as well as microscopic examination of the various sections of the embryos. Lecture (3.00), Laboratory (3.00). Prerequisites: BIO-101 and BIO-203.

**BIO-203 General Biology II (4.00 cr.)**

This course explores the evolution and biodiversity of representative organisms in the plant and animal kingdoms. Studies of plants investigate diversity, structure, and the physiology of absorption, transport, and photosynthesis. Students will examine the structure and life cycles of invertebrate and vertebrate animals. In a unit on Ecology, students will learn how living organisms interact with their environment. Laboratory exercises utilizing observation, experimentation, microscopy, and dissection provide practical demonstrations of the topics covered in lecture. >General Education Course. Lecture (3.00), Laboratory (3.00). Prerequisite: BIO-101.

**BIO-209 Anatomy and Physiology II (4.00 cr.)**

This course continues the study of human anatomy and physiology. Among the topics considered are the digestive system, metabolism, urinary system, fluid and electrolyte balance, the nervous system, the endocrine system, and the reproductive system. Lectures are supplemented by writing assignments, discussion and laboratory sessions that include dissection and elementary physiology experiments. >General Education Course. Lecture (3.00), Laboratory (3.00). Prerequisite: BIO-109; minimum grade C.

**BIO-210 Introduction Biotechnology (4.00 cr.)**

This course is designed to give students both a theoretical background and a working knowledge of the instrumentation and techniques employed in a biotechnology laboratory. Emphasis will be placed on the introduction of foreign DNA into bacterial cells, as well as the analysis of nucleic acids (DNA and RNA) and proteins. Lecture (3.00), Laboratory (3.00). Prerequisite: BIO-101.

**BIO-211 Introduction Bioinformatics (3.00 cr.)**

This course is designed to give students both a theoretical background and a working knowledge of the techniques employed in. Emphasis will be placed on biological sequence (DNA, RNA, protein) analysis and its applications. Lecture (2.00), Laboratory (2.00). Prerequisites: BIO-101 and BIO-210.

**BIO-215 Vertebrate Anatomy and Physiology II (4.00 cr.)**

This course is a continuation of Vertebrate Anatomy and Physiology I. The endocrine, circulatory, respiratory, renal, reproductive and digestive systems will be studied. Normal homeostatic mechanisms and pathophysiological conditions are emphasized, as well as the interrelationships of organs and organ systems. Dissection is required as part of the laboratory syllabus. Lecture (3.00), Laboratory (3.00). Prerequisite: BIO-115.

**BIO-225 Invertebrate Zoology (4.00 cr.)**

This course is a survey of the organisms without backbones, the invertebrates. Topics include the taxonomic concepts of cladistics versus the Linnaean phylogenetic study of these organisms. Concepts such as prostomates vs. deuterostomates, the development of the coelom, metamorphosis, etc., will be discussed. Laboratory sessions include external and internal examinations (dissections) of these organisms and descriptive and practical reinforcement of lecture materials. Lecture (3.00), Laboratory (3.00). Prerequisites: BIO-101 and BIO-203.

**BIO-227 Principles of Ecology (4.00 cr.)**

This course deals with terrestrial and aquatic ecology. Topics covered include abiotic characteristics of ecosystems as well as detailed discussions of populations, communities, ecosystems and biomes. Discussions also include such topics as ecological succession and paleoecology. Qualitative and quantitative data of ecosystems is gathered during the early part of the semester in which ecological data will be collected during field experiences. These data will be analyzed during the second half of the semester in the laboratory. Statistical analysis and report writing will also be stressed. Lecture (3.00), Laboratory (3.00). Prerequisites: BIO-101 and BIO-203.

**BIO-228 Introduction Marine Biology (4.00 cr.)**

This course deals with a basic introduction to marine environments, emphasizing ecological principles governing marine life throughout the world. Topics include basic oceanography, marine ecological systems, planktonic communities, deep-sea biology, subtidal and intertidal ecology, estuarine and coral reef communities, human impact, mariculture and pollution. Lab sessions will include in-house lab exercises, field experiences, analysis of data, group projects and report writing. Lecture (3.00), Laboratory (3.00). Prerequisites: BIO-101 and BIO-203.

**BIO-229 Tropical Marine Ecology (4.00 cr.)**

This course covers characteristics of populations, communities, and ecosystems found in tropical regions. Taught at the Keys Marine Laboratory in Long Key, Florida, during the summer semester, students study coral reef structure and ecology, the intertidal zone, mangrove and terrestrial communities, interstitial organisms, and trophic relationships. Lab sessions include experiences, group projects and report writing. Lecture (3.00), Laboratory (3.00). Prerequisites: BIO-101 and BIO-203.

**BNF – BANKING AND FINANCE****BNF-101 Principles of Banking (3.00 cr.)**

This course presents the fundamentals of bank and financial services functions in a descriptive fashion so that the beginner banker may acquire a broad and operational perspective. Topics considered include fundamentals of negotiable instruments, contemporary banking issues, and developments within the banking industry. Lecture (3.00).

**BNF-102 Personal Finance and Money Management (3.00 cr.)**

This course provides students with a basic understanding of personal finance so that they may properly manage their own financial affairs. Topics include financial planning, budgeting and income taxes; managing savings plans, credit cards and debt problems; renting vs. buying; health, disability and life insurance; investing in stocks, bonds and mutual funds; and retirement planning, wills and estate planning. Lecture (3.00).

**BNF-103 Sports Finance (3.00 cr.)**

This course provides students with a foundation of financial practices associated with the sports industry. Analysis of financial statements, risk, time value of money, financial ratios, budgeting, debt and equity financing, facility financing, park and recreation agencies, feasibility studies, and other relevant financial matters associated with college athletics and professional sports. Lecture (3.00).

**BNF-201 Principles of Finance (3.00 cr.)**

This course provides the beginning student with awareness and a basic conceptual understanding of financial theory and practice. Topics considered include financial analysis and control, working capital management, capital budgeting, long-term financing, financial leverage, and financial ratios. Lecture (3.00). Prerequisites: ACC-101 or ACC-110, and BUS-101.

**BNF-202 Asset Management (3.00 cr.)**

This course provides an overview of the asset management industry, the products and services it provides, and how assets professionals can help potential and existing customers. Principal topics covered are types of assets, investment vehicles, agencies, wills and the probate process, customer relationships, guardianships and Powers of Attorney, personal trusts and selling, hedge funds, marketing and competition. Lecture (3.00). Prerequisite: BNF-101 or BUS-101.

**BNF-203 Cash Management (3.00 cr.)**

This course introduces the student to the importance of cash management in business and the basic concepts of cash, credit and collection. Topics include cash management tools, the payments system, international cash management, general uses of credit, use of financial statements and financial ratios to make credit-related decisions, and policies and procedures for handling collections. Other topics, such as technology, customer relationship, banking relationship, and finance companies, may be included. Lecture (3.00). Prerequisites: ACC-101 or ACC-110, and BUS-101.

**BNF-207 Principles Investment and Portfolio Management (3.00 cr.)**

This course examines investment instruments, the investment process and markets and investment strategies. Students will explore the characteristics of stocks, bonds, options, futures, and other investment vehicles. Portfolio theory will be studied. Lecture (3.00). Prerequisites: (ACC-101 or ACC-110,) and BUS-101.

**BNF-208 International Finance (3.00 cr.)**

This course provides students with an understanding of international financial transactions. Topics covered included balance of payment problems with their attendant trade barriers and restrictions, methods of payment and their inherent risks, and strategies to optimize export financing and foreign capital investment yields. Lecture (3.00). Prerequisites: (BUS-201 or BUS-262) and (ACC-101 or ACC-110).

**BNF-462 Co-Op Work Experience (Banking and Finance) (2.00 cr.)**

This course is a recommended elective for all students who are pursuing an Associate in Applied Science degree in the Banking, Credit and Finance curriculum. It is designed to provide practical banking and/or credit management experience in a college-approved work environment. Job placement assistance is available through the Co-Op Office. 120 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (8.00). Prerequisite: BNF-101.

**BNF-463 Co-Op Work Experience (Banking and Finance) (3.00 cr.)**

This course provides the student with practical, supervised experience in various areas of finance and banking. Through on-the-job experience, students acquire some of the practical expertise and knowledge needed to pursue a career in these fields. Students are supervised by a faculty member and job placement assistance is available through the Co-Op Office. 1 lecture, 3 credits plus 225 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (12.00). Prerequisites: BNF-101, BNF-102, and BNF-203.

**BUS – BUSINESS ADMINISTRATION****BUS-101 Intro to Business (3.00 cr.)**

This course is a study of the activities that make up the field of business. Some of the topics covered are the ownership, organization, and management of business, finance, marketing, unions, and government regulations. Lecture (3.00).

**BUS-102 Retailing (3.00 cr.)**

This course provides the student with the fundamental principles of retailing and their application in small, medium-sized, and large stores. Topics include store location, layout, and organization; consumer behavior and customer relationships; employee training and motivation; sales forecasting, and inventory management; information flow; merchandising; and strategies to gain a competitive edge in the local and global marketplace. Lecture (3.00).

**BUS-103 Business Mathematics (3.00 cr.)**

This course provides a background in the principles and problems related to banking, interest, depreciation, and the pricing of. Attention is also given to commercial paper, consumer credit, and various taxes. Lecture (3.00). Prerequisite: MAT-011.

**BUS-104 Customer Service (3.00 cr.)**

This course emphasizes the relevance of customer service in all types of businesses. Topics include importance of customer service, external and internal customers, cost of poor customer service, challenges of customer service, ethics in customer service, problem solving, empowerment, effective communication, dealing with difficult customers, motivation and leadership, customer retention and measurements of customer satisfaction. Lecture (3.00).

**BUS-105 Business Communications (3.00 cr.)**

**This course covers the communications skills of writing, speaking and listening, with particular application to the field of business. Emphasis is placed on effective techniques to be used in interviews and meetings. Students learn how to prepare business letters, memos, and reports. Oral presentations are included.** Lecture (3.00).

**BUS-106 Effective Selling (3.00 cr.)**

This course presents current theories and practices for salespersons of consumer and industrial goods and services. Topics include evaluation of customer needs, importance of product data, buying motives, the development of sales presentations, personal qualifications of the salesperson and career opportunities. Lecture (3.00).

**BUS-107 e-Tailing (3.00 cr.)**

This course covers the key critical success factors and business concepts serving as the foundation of the fastest growing segment of the overall total retailing area. The course covers the unique approaches of B2B, B2C, and C2B organizations. Web hosting alternatives, search engine optimization, legal/ethical considerations, and supply chain factors are emphasized for their importance. Lecture (3.00).

**BUS-110 Transportation Logistics and Supply Chain Management (3.00 cr.)**

This course covers the basic concepts and processes in distributing goods and services within a supply chain environment. The course covers trends in globalization, technology, and supply/demand planning. Specific topics include demand forecasting, collaborative planning procurement, inventory fundamentals, transportation alternatives, warehousing logistics, materials handling, and packaging. The course also addresses strategic and operational aspects of transport management, information systems architecture, E-Commerce, and third party logistics. Lecture (3.00).

**BUS-115 Introduction to Nonprofit Organizations (3.00 cr.)**

This course examines the principles, techniques, and administration of the not-for-profit sector. Topics include the history, missions, and distinctions of nonprofits, as well as their governance, funding and development, financial framework, accountability, management, marketing, as well as their relationships with government and profit sectors. Lecture (3.00).

**BUS-116 Funding and Grant Management (3.00 cr.)**

This course examines the requirements to launch and conduct a viable fundraising program for a nonprofit organization. Emphasis is placed on matching organizational needs and programs to available funding resources. Topics include the search for funding, writing effective funding proposals and solicitation letters, the nature and requirements of grant writing for nonprofits, and grant management. Lecture (3.00).

**BUS-129 Event Planning and Management I (3.00 cr.)**

This course will provide the information and tools needed to meet the needs and expectations of participants of meeting and event participants in an ever-changing profession and conceptual age, with content relevant to the required daily activities and decisions. Lecture (3.00).

**BUS-150 Sport and Team Branding (3.00 cr.)**

This course examines brand management as it applies to sports and sport merchandising. Study includes the impact, desire, and profitability of branding; developing and executing a successful brand strategy; building, measuring, and managing brand equity; as well as leveraging the marketing mix to build a high-demand brand platform with a strong customer focus by integrating merchandise items with creative sponsorships. Lecture (3.00).

**BUS-170 Small Business Management (3.00 cr.)**

This course introduces the student to the basic knowledge and skills necessary for managing or owning a small business. Topics include getting started, planning and managerial skills, inventory, finance, risk management, marketing, taxation, and community responsibility. Students will analyze a variety of cases. Lecture (3.00).

**BUS-201 Marketing Principles (3.00 cr.)**

This course introduces the student to the principles, functions, and tools of modern marketing practices. The interrelationship product, price, promotion, and distribution decisions on the success of an organization are emphasized. The impact of the economic, competitive, socio-cultural, technological, and legal-regulatory forces in the marketing environment is explored. The similarities and differences in the marketing of goods, services, and ideas are considered. Lecture (3.00). Prerequisites: BUS-101 or BUS-115.

**BUS-202 International Marketing (3.00 cr.)**

This course introduces the student to the global marketing environment and to the diverse factors that shape it. Topics of discussion include product, pricing, promotion, and distribution decisions as they relate to the international marketplace for goods and services. Lecture (3.00). Prerequisite: BUS-101.

**BUS-203 Sports Marketing (3.00 cr.)**

This course applies a marketing focus on the sports industry. Study includes target marketing and segmentation, sponsorship, promotions, events, and the creation of an optimum marketing mix for sport products. This course also examines the pricing dynamics of sport, sports franchising and managing controversial issues, for example, those surrounding celebrities. Lecture (3.00). Prerequisite: BUS-101.

**BUS-205 Entrepreneurship (3.00 cr.)**

This course is an overview of the concepts and principles of business development and management. The use of case study analysis facilitates practical understanding and appreciation of business concepts. In addition,

students gain further practical knowledge through the use of the Internet. The course provides a comprehensive perspective of ownership and management of a small business or new venture. Lecture (3.00). Prerequisite: BUS-101.

**BUS-207 Principles of Business Management (3.00 cr.)**

This course introduces the student to the management process through which an organization utilizes human, financial, physical, information and entrepreneurial resources effectively and efficiently to accomplish the organization's objectives. The managerial of planning, organizing, staffing, communicating, leading, and controlling are explored within the context of a rapidly changing and increasingly diverse global society. The ethical implications of management decisions are emphasized. Lecture (3.00). Prerequisite: BUS-101 or BUS-115.

**BUS-208 Human Resources Management (3.00 cr.)**

This course examines procedures to be followed in supervising workers under applicable legal and contractual agreements. Techniques of hiring, training, evaluation, promotion, remedial action, and dismissal are examined. Special attention is devoted to relations with unions. Case studies are emphasized, and student participation is encouraged through role playing, visual aids, and personal projects. Lecture (3.00). Prerequisite: BUS-101 or BUS-115.

**BUS-210 E-Marketing (3.00 cr.)**

This course explores the use of the Internet, World Wide Web, and online social networking on the marketing of goods, services, and ideas. Topics include identification of web-based marketing goals, selection of the appropriate Web-based marketing strategy, conducting primary and secondary marketing research, Web-design criteria, Web-based advertising techniques, and revenue streams. Students will develop and integrated Internet marketing plan, including development of a Web presence, for an organization. Lecture (3.00). Prerequisite: BUS-101 or BUS-115 or BUS-170 or BUS-201.

**BUS-211 Internet Law (3.00 cr.)**

This course introduces the student to the complexities of the legal environment in the information age with a special focus on E-commerce. Topics covered include basic contract law; current and future contract law for E-commerce; contracting and licensing software; torts and cybertorts; privacy and government regulations; intellectual property laws including patents, trade secrets, copyrights and trademarks; and Internet agreements. Students will review and analyze actual cases. Lecture (3.00). Prerequisites: (BUS-101 or BUS-170) and INF-163.

**BUS-229 Event Planning and Management II (3.00 cr.)**

This course will provide the information and tools needed to meet the needs and expectations of participants of meeting and event participants in an ever-changing profession and conceptual age, with content relevant to the required daily activities and decisions. Lecture (3.00). Prerequisite: BUS-129 or HRM-129.

**BUS-233 Business Law I (3.00 cr.)**

This course is a survey of the law as it applies to business. It covers the law of contracts, torts, crimes, and commercial paper and analyzes the New Jersey Court System. Lecture (3.00). Prerequisite: BUS-101.

**BUS-234 Business Law II (3.00 cr.)**

This course continues the survey of business law and covers sales, consumers' rights, bailment, insurance, partnerships, and corporations. Lecture (3.00). Prerequisite: BUS-233.

**BUS-250 Advertising (3.00 cr.)**

This course is designed to give the student a broad view of advertising principles and their relationship to marketing. The student will select and use different media, conduct market research, write copy, and prepare advertising layouts. An advertising campaign will be completed as a term project. Lecture (3.00). Prerequisite: BUS-201.

**BUS-251 Sports Merchandising and Promotion (3.00 cr.)**

This course examines merchandising management as it relates to the sports industry. Study includes theories of successful sport merchandising; examination of the planning, implementation and control of sport sales and promotion; use of technology, such as holograms, to protect brand validity; licensing; outlet venues for merchandise; organizing a sports promotion and sales campaign; as well as e-commerce merchandising as a strategic

resource of a sports team website. Lecture (3.00). Prerequisite: BUS-101 or BUS-150 or WEX-127 or PSY-111 or BUS-203.

#### **BUS-262 Fundamentals International Business (3.00 cr.)**

This course is designed to familiarize the student with the institutional and practical aspects of international business. Principal topics presented include global business environments, strategies for international management, marketing, finance, and relevant legal and political considerations. Lecture (3.00). Prerequisite: BUS-101.

#### **BUS-263 International Trade Documents and Transportation (3.00 cr.)**

This course provides the student with an understanding of the terminology and mechanics of the movement of goods from one country to another. Among the topics covered are selling terms and conditions, in land documentation to port of exit, foreign documentation, and ocean and air transportation strategies. Lecture (3.00). Prerequisite: BUS-101.

#### **BUS-271 E-Commerce (3.00 cr.)**

This course explores how small and large businesses use the Internet to increase or create their market presence. Students will design and develop a prototype of an electronic enterprise suitable for the Web. Lecture (2.00), Laboratory (2.00). Prerequisite: BUS-101.

#### **BUS-463 Co-Op Work Experience (Business Administration) (3.00 cr.)**

This course provides the student with practical, supervised experience in various areas of business management, marketing, or international business. Through on the job experience, students acquire some of the practical expertise and knowledge needed to pursue a career in these fields. Students are supervised by a faculty member and job placement assistance is available through the Co-Op Office. 225 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (14.00). Prerequisite: BUS-201 or BUS-202 or BUS-207 or BUS-208.

#### **BUS-473 Co-Op Work Experience (Business Administration) (3.00 cr.)**

This course enables the student to learn and practice food marketing skills under professional guidance in a college approved work environment. The student's work is supervised by a trained faculty member. Students must work a minimum number of hours for the semester and attend the weekly seminar. 180 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (11.00). Corequisite: BUS-268.

#### **BUS-474 Co-Op Work Experience (Business Administration) (4.00 cr.)**

This course enables the student to learn and practice food marketing skills under professional guidance in a college approved work environment. The student's work is supervised by a trained faculty member. Students must work a minimum number of hours for the semester and attend the weekly seminar. 240 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (15.00). Corequisite: BUS-268.

## CHM – CHEMISTRY

#### **CHM-100 Introduction to Chemistry (4.00 cr.)**

This course is designed to give non-science majors awareness and an understanding of the fundamental concepts of modern chemistry. Topics covered include measurement, atomic theory, chemical bonding, the periodic table, chemical reactions, and stoichiometry. The course includes a writing and communications requirement that relates the topics covered to a broad historical, social, and cultural context. >General Education Course. Lecture (3.00), Laboratory (3.00). Prerequisite: MAT-011.

#### **CHM-102 Chemistry in Context (4.00 cr.)**

This course is a student-centered approach for non-science majors to learn fundamental chemistry and its linkage to consumer, public policy, business and international affairs. Core topics taught include chemistry terminology, formulas, reactions, scientific measurements, shapes of molecules, chemical toxicity, green chemistry, consumer chemistry and energy sources. Laboratory activities emphasize fundamental concepts and measurements. Use of scientific and governmental Web sites, papers, poster presentations and discussion groups draw on students' major fields of study. >General Education Course. Lecture (3.00), Laboratory (3.00). Prerequisite: MAT-011.

#### **CHM-110 Basic Biochemistry (4.00 cr.)**

This course is a course for Dental Hygiene students. Principles of atomic theory, chemical bonding, and chemical reactions are studied with an

emphasis on acids and bases. The structure and function of the major groups of organic compounds are studied in order to provide a basis for understanding the nature and role of the major classes of biochemical compounds such as carbohydrates and proteins. The study of enzymes is also presented. This course does not substitute for CHM-112. Lecture (3.00), Laboratory (3.00). Prerequisite: MAT-011.

#### **CHM-112 College Chemistry (4.00 cr.)**

This course is a survey of the fundamentals of inorganic chemistry, organic chemistry, and biochemistry. Topics taught in inorganic chemistry include atomic theory, chemical bonding, chemical reactions, nomenclature, gas laws, and acid-base buffers. The structure and function of the major classes of organic compounds are studied. Topics in biochemistry covered include proteins, carbohydrates, lipids, nucleic acids, and enzymes. The course includes a writing and communications requirement that relates the topics covered to a broad historical, social, and cultural context. >General Education Course. Lecture (3.00), Laboratory (3.00). Prerequisite: MAT-011; minimum grade C.

#### **CHM-140 General Chemistry I (3.00 cr.)**

This course is a study of the fundamental laws and theories of chemistry. Topics covered include units of measurement, dimensional analysis, stoichiometry, aqueous reactions, thermochemistry, electronic structure of the atom, periodicity, chemical bonding, molecular geometry and properties of gases. >General Education Course. Lecture (3.00). Prerequisites: CHM-100, and MAT-031/MAT-032 or MAT-035. Corequisites: CHM-141 and MAT-160.

#### **CHM-141 General Chemistry I - Lab (1.00 cr.)**

This course is designed to familiarize the student with chemical laboratory techniques through problem solving experiments. It complements material covered in CHM-140. Written lab reports are required. >General Education Course. Laboratory (3.00) Corequisite: CHM-140.

#### **CHM-212 Organic and Biochemistry (Spring Only) (4.00 cr.)**

This course is designed to give students an understanding of the principles of Organic Chemistry and of Biochemistry. The study of Organic Chemistry will emphasize a functional group approach. Topics studied will include hydrocarbons, alcohols, carbonyl compounds, and amines. Topics taught in Biochemistry will include carbohydrates, proteins, lipids, nucleic acids, bioenergetics, enzymes, and biosynthetic pathways. Lecture (3.00), Laboratory (3.00). Prerequisites: (CHM-140 or CHM-112) and MAT-011.

#### **CHM-240 General Chemistry II (3.00 cr.)**

This is the second course of a two-semester sequence of general chemistry. Topics covered include intermolecular forces, properties of solutions, chemical kinetics, equilibrium, thermodynamics, acids and bases, and electrochemistry. >General Education Course. Lecture (3.00). Prerequisite: CHM-140; minimum grade C.

#### **CHM-241 General Chemistry II - Lab (1.00 cr.)**

This course is a continuation of CHM-141, with greater emphasis on more sophisticated experiments and equipment. It complements the material covered in CHM-240. Written lab reports are required. >General Education Course. Laboratory (3.00). Prerequisites: CHM-140 and CHM-141; minimum grade C. Corequisite: CHM-240.

#### **CHM-250 Introduction to Instrumental Methods of Chemical Analysis (4.00 cr.)**

This course is designed to give students a working knowledge of the instrumentation used in a modern analytical chemistry laboratory. Emphasis will be placed on learning techniques with the broadest range of pharmaceutical, environmental, and industrial application. The specific experimental methods include potentiometer techniques; atomic absorption and emission spectroscopy; UV / visible and fluorescence spectroscopy; NMR, FTIR, gas chromatography, HPLC, TLC, GC/MS and electrophoresis. Lecture (2.00), Laboratory (6.00). Prerequisites: CHM-240 and CHM-241.

#### **CHM-260 Organic Chemistry I (4.00 cr.)**

This course is a study of the fundamental classes of organic compounds, with emphasis on the relationship of structure and reactivity. Electronic theory, energy relationships, stereochemistry, and reaction mechanisms are used to explain reactivity. Molecular modeling is emphasized, particularly with respect to electrostatic potential maps. Practical applications, including syntheses, are studied and carried out in the laboratory. Instrumentation such as UV, IR, NMR, HPLC, and GC/MS are routinely used as qualitative

and quantitative tools. Lecture (3.00), Laboratory (3.00). Prerequisites: CHM-240 and CHM-241.

#### **CHM-262 Organic Chemistry II (4.00 cr.)**

This course is a continuation of CHM-260 and includes the study of aromatic and organometallic compounds, spectroscopy, and the chemistry of carbonyl compounds. Topics presented include the theoretical basis for molecular reactivity, molecular modeling, determination of structure with emphasis on spectroscopic methods, mechanisms of chemical reactions, and synthesis of organic compounds. The microscale laboratory emphasizes preparation, purification, and identification of organic compounds. Analysis by IR, GC, GC/MS, NMR, and UV/VIS are integral to experiments. Lecture (3.00), Laboratory (3.00). Prerequisite: CHM-260.

### CIN – CINEMA

#### **CIN-140 Introduction to the Cinema (3.00 cr.)**

This course is a study of film as an art form. The course is designed to awaken a more sensitive and critical response to the cinema through an understanding of its form, content, development, and criticism. Films are screened to demonstrate these elements. >General Education Course. Lecture (2.00), Laboratory (2.00).

#### **CIN-150 Special Topics in Cinema I (3.00 cr.)**

This course permits specialized topics in cinema to be studied as a part of more general courses. Students may repeat this course for separate credit. Topics may include, but are not limited to, Women in Cinema, History of Animation, and World Cinema. Lecture (3.00).

#### **CIN-160 Women in Cinema (3.00 cr.)**

This course is a study of how the images, stories, and formal constructions in film can frame female identities. The course is only about the representation of women in film history, it is also a study of cinema by women (such as Maya Deren, Su Friedrich, and Chantal Akerman.) Specific topics addressed over the span of the semester may include the history of the "weepies;" the biographies of certain actors and filmmakers; feminist film theory; the formal aspects of film; the depiction of women across film genres; and the role of filmmaking in the American and international feminist movements. >Diversity Course. Lecture (2.00), Laboratory (2.00).

#### **CIN-170 American Cinema (3.00 cr.)**

This course is a study of the language, history, and cultural impact of the American Film Industry. It explores the technology and aesthetics of Hollywood and non-Hollywood films. It also deals with how these films reflect the changing images Americans have had of themselves. Through in-class screenings, students will gain an understanding of each film's form, content, development, and criticism. Some specific areas covered include film production and language, the Studio System, and film genres. Lecture (2.00), Laboratory (2.00).

#### **CIN-240 The Classic Cinema (3.00 cr.)**

This course is an in-depth study of the style, philosophy, and significance of selected directors and films. Lecture (3.00). Prerequisites: CIN-140/THR-140.

#### **CIN-250 Special Topics in Cinema II (3.00 cr.)**

This course permits specialized topics in cinema to be studied as a part of more general courses. These courses require that students have had some experience using basic cinema terminology (e.g., shot structure, camera movement) through a 100 Level Cinema course. Students may repeat this course for separate credit. Topics may include, but are not limited to, Major Filmmakers, Documentary Cinema, Avant-Garde Cinema, Classic Cinema, and Film Noir. Lecture (3.00). Prerequisite: CIN-140 or THR-140 or CIN-150 or ART-105.

### CIS – COMPUTER SCIENCE

#### **CIS-158 Introduction Computer Science (3.00 cr.)**

This course Science is intended for students who are interested in an algorithmic approach to problem solving using computers and their applications. Topics presented include terminology used in the computer field, introduction to computer systems and their applications. Students will work with various software packages on a microcomputer. >General

Education Course. Lecture (2.00), Laboratory (2.00). Prerequisite: MAT-031/MAT-032 or MAT-035.

#### **CIS-163 Computer Programming: QBasic (3.00 cr.)**

This course is an introduction to programming techniques using the QBASIC language. Students learn how to develop programs for various applications, and they obtain extensive hands-on experience in the operation and use of a microcomputer. The course is intended for students in the liberal arts and sciences. Students with prior programming experience should take CIS-266 Computer Programming: Visual BASIC. Lecture (2.00), Laboratory (2.00). Prerequisite: MAT-031/MAT-032, MAT-035 or MAT-160.

#### **CIS-165 Fundamentals of Programming (3.00 cr.)**

This course is an introduction to computer systems and structured programming techniques. Topics considered include an introduction to the components of a computer system; problem solving and algorithm design; standard data types and declarations; input and output techniques; operators; library functions; fundamental control statements; arrays and strings; data sorting; and files. Applications are selected from various fields of study. >General Education Course. Lecture (2.00), Laboratory (2.00). Prerequisite: MAT-031/MAT-032, MAT-035 or MAT-160.

#### **CIS-265 Advanced Programming Concepts (3.00 cr.)**

This course is a continuation of CIS-165 C++ Programming I. Topics considered include functions; structured programming principles; pointer arithmetic; multidimensional arrays; fundamental sorting and searching algorithms; structures; unions; sequential and random access file processing algorithms; and the run-time behavior of programs. Lecture (3.00), Laboratory (1.00). Prerequisite: CIS-165.

#### **CIS-266 Computer Programming: Visual Basic (3.00 cr.)**

This course is an introduction to a programming tool for developing user-friendly Windows applications in the QBASIC programming language. It is intended for the student who has already learned the fundamental programming structures of a computer language. After a review of the fundamentals of QBASIC, Visual BASIC tools will be studied and incorporated into applications using modular programming techniques, arrays, sorting and searching techniques, and sequential and random access files. Lecture (3.00), Laboratory (1.00). Prerequisite: CIS-163 or CIS-165.

#### **CIS-270 Programming for Science Applications (3.00 cr.)**

This is a computer programming language course with emphasis on mathematical, scientific, and engineering applications using structured programming principles. Topics covered include data types, specifications, fixed and floating-point arithmetic, input and output techniques, multidimensional arrays, external functions and subroutines. Lecture (2.00), Laboratory (2.00). Prerequisite: MAT-180.

#### **CIS-271 Computer Organization and Assembly Language (3.00 cr.)**

This course is a study of the interactions between hardware and software necessary for understanding the organization and application of computer systems. Topics to be considered include data representation, Boolean algebra and computer logic, the central processing unit and program execution, main memory, classes of machine language instructions, addressing formats, addressing modes, and the fundamentals of assembly language programming. Lecture (3.00). Prerequisite: CIS-165.

#### **CIS-277 Data Structures and Algorithms (3.00 cr.)**

This course is a study of the representation and implementation of abstract data types and related algorithms that are used in computer science. Topics considered include lists, strings, stacks, queues, trees, graphs, networks, file structures, recursive functions, sorting techniques, searching techniques, hashing, and analysis of algorithms. Lecture (3.00), Laboratory (1.00). Prerequisite: CIS-265; minimum grade C.

#### **CIS-278 Database Systems (3.00 cr.)**

This course is an introduction to the design and implementation of database systems. Topics considered include database architecture, physical data organization, the Entity-Relationship model, the hierarchical, network, and relational models of data, normalization theory, data definition languages and query facilities, data integrity and security, and programming language interfaces. Students use a DBMS to develop an actual database. Lecture (3.00), Laboratory (1.00). Prerequisite: CIS-265 or CIS-266.

**CIS-287 Object-Oriented Programming (3.00 cr.)**

This course is an introduction to the object-oriented approach to program development. Topics considered include classes and their implementation, static members, friend functions, composite classes, functions and operator overloading, inheritance, polymorphism and an introduction to object-oriented analysis and design. Lecture (3.00), Laboratory (1.00). Prerequisite: CIS-265.

**CIS-288 Discrete Mathematics (Computer Science) (4.00 cr.)**

This course is a study of the mathematical theory and techniques that underlie computer science. Topics considered include set theory, induction, counting techniques, relations and functions, recurrence relations, trees, graphs, Boolean algebra and circuits, grammars and an introduction to automata theory. Applications of these topics in computer science are included in the course. Lecture (4.00). Corequisite: CIS-265.

**CIS-289 Systems Analysis and Design (Computer Science) (3.00 cr.)**

This course is an introduction to the terminology, concepts, and tools for these two phases of the system development life cycle. Topics considered include preliminary investigation, information requirements analysis, project management, data specification, flow diagrams, logical data modeling, process specification, structure charts, design techniques, design criteria, and packaging. Lecture (3.00). Corequisite: CIS-277.

## COM - COMMUNICATION

**COM-100 Speech Communication (3.00 cr.)**

This course guides students through the methods of organizing, delivering, and evaluating the spoken word in various speech situations. Intrapersonal and interpersonal communication in conjunction with public address is studied. >General Education Course. Lecture (3.00).

**COM-101 Mass Media Communication (3.00 cr.)**

This course is a study of the print and broadcast media. The roles of media in society, a history of media, and the legal control of media are explored. Lecture (3.00).

**COM-103 Introduction to Radio and Television Broadcasting (3.00 cr.)**

This course is a study of American broadcasting and its historical antecedents. This course is designed to survey the technical, economic, regulatory, aesthetic, and philosophical bases of broadcasting. Current production techniques utilized in radio and television are examined. Lecture (3.00).

**COM-105 Radio Production (3.00 cr.)**

This hands-on course is designed to give the student experience in writing, directing and producing a variety of radio formats. Radio commercials, dramas, musical programs, and actualities are considered in this course. Lecture (2.00), Laboratory (2.00).

**COM-106 TV Production (3.00 cr.)**

This is a practical, hands-on course that is designed to give the student experience in writing, directing, and producing a variety of television programs. Students apply theories, principles and skills of TV and videotape techniques through camera usage, control room operations, and videotape editing. Lecture (2.00), Laboratory (2.00).

**COM-110 Print Journalism Production (3.00 cr.)**

This is a hands-on course in which students write for, edit, and produce "The Torch," the College's student newspaper. College. This course covers such topics as reporting, news story editing, ethical and legal issues for student newspapers, news photography and photo editing, formatting, layout, and design. Lecture (2.00), Laboratory (2.00).

**COM-111 Video Post-Production (3.00 cr.)**

This is a hands-on course designed to train students in advanced post-production techniques utilizing non-linear computer based editing. Audio sweetening, computer graphics, and animation will be discussed. Lecture (3.00).

**COM-114 Intercultural Communications (3.00 cr.)**

This course provides the student with practical information regarding the problems present in communicating with people of other cultures. It also explores cross-cultural differences in the communication process in order to learn how to communicate effectively with one another across cultural boundaries. >Diversity Course. Lecture (3.00).

**COM-116 Interpersonal Communication (3.00 cr.)**

This course is a study of the way people communicate in the process of developing and maintaining relationships. Class activities include the analysis of communication in dyadic and small group situations. The following topics are examined with respect to their effects on interpersonal communication: self-awareness, shyness and assertiveness, listening, attraction, conflict, loneliness, and love. Lecture (3.00).

**COM-119 Business and Professional Speaking (3.00 cr.)**

This course teaches theories and practices of effective communication in the context of business settings: interpersonal, interviews, group, and public speaking. Lecture (3.00).

**COM-122 Argumentation and Debate (3.00 cr.)**

This is a course in the methods of effective argumentation, persuasion, and educational debate, with emphasis on rational decision-making. This course is designed for students who want preparation for participation in a democratic society. Lecture (3.00).

**COM-201 Introduction to Journalism (3.00 cr.)**

This course is a study of the fundamentals of reporting with emphasis on the modern news story. Elements of news style, of news stories, news sources, ethics, and the mechanics of newspaper production are considered. Lecture (3.00). Prerequisite: WRT-101; minimum grade C.

**COM-205 Advanced Radio Production (3.00 cr.)**

This is a hands-on course designed to produce broadcast quality programs. Directing, writing, technical, editing and voice utilization skills will be emphasized. Lecture (3.00). Prerequisite: COM-105.

**COM-206 Writing for the Mass Media (3.00 cr.)**

This course provides a survey of media formats and writing techniques for print and broadcast. Students are introduced to the forms and methods used to prepare information for the various mass media including magazines, newspapers, radio, television and the Web. Public relations writing and preparing advertising copy are also covered. Lecture (3.00). Prerequisite: WRT-101. Corequisite: COM-101.

**COM-207 TV Production II (3.00 cr.)**

This is a course that provides the student with an opportunity to refine existing skills through the production of a regularly scheduled public affairs program. A functional awareness of all factors involved in the production of a series on a regular basis is developed. Lecture (3.00). Prerequisite: COM-106.

**COM-208 Directing for Television (3.00 cr.)**

This course is an introduction to television directing and to the pre-production steps necessary to the creation of a television program. The theoretical development of formats, lighting, set determinations, and crew selection are considered. Students are required to direct a variety of television program formats. Lecture (3.00). Prerequisite: COM-106.

**COM-210 Public Relations (3.00 cr.)**

This course is a study of the basic principles and practices of promotion including history, development, ethics, and media selection. Emphasis will be placed on preparing news releases, advisement for coverage, and press kits for target audiences. Lecture (3.00). Prerequisite: WRT-101.

**COM-461 Co-Op Work Experience (Media) (1.00 cr.)**

This is a fieldwork course in media production, planning, or programming on an individual basis. The student must attend weekly seminars and/or prepare reports or other projects as required by the departmental staff. Credit is based on work with an approved broadcast or non-broadcast organization, including television and radio stations, networks, production houses, and cable TV operations. Job placement assistance is available through the Co-Op office. 60 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (3.00). Prerequisite: COM-105 or COM-106.

**COM-462 Co-Op Work Experience (Media) (2.00 cr.)**

This course is a fieldwork course in media production, planning, or programming on an individual basis. The student must attend weekly seminars and/or prepare reports or other projects as required by the departmental staff. Credit is based on work with an approved broadcast or non-broadcast organization, including television and radio stations, networks, production houses, and cable TV operations. Job placement

assistance is available through the Co-Op office. 120 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (8.00). Prerequisite: COM-105 or COM-106.

**COM-463 Co-Op Work Experience (Media) (3.00 cr.)**

This is a fieldwork course in media production, planning, or programming on an individual basis. The student must attend weekly seminars and/or prepare reports or other projects as required by the departmental staff. Credit is based on work with an approved broadcast or non-broadcast organization, including television and radio stations, networks, production houses, and cable TV operations. Job placement assistance is available through the Co-Op office. 180 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (12.00). Prerequisite: COM-105 or COM-106.

**COM-464 Co-Op Work Experience (Media) (4.00 cr.)**

This is a fieldwork course in media production, planning, or programming on an individual basis. The student must attend weekly seminars and/or prepare reports or other projects as required by the departmental staff. Credit is based on work with an approved broadcast or non-broadcast organization, including television and radio stations, networks, production houses, and cable TV operations. Job placement assistance is available through the Co-Op office. 240 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (16.00). Prerequisite: COM-105 or COM-106.

**COM-471 Co-Op Work Experience (Journalism) (1.00 cr.)**

This course gives students work experience in a newspaper office and provides the opportunity to acquire and apply skills in news writing, photojournalism, layout, and/or newspaper production. Work sites must be approved by the faculty coordinator. Co-Op job assistance is available through the Co-Op office. 60 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (3.00). Prerequisite: COM-201.

**COM-472 Co-Op Work Experience (Journalism) (2.00 cr.)**

This course gives students work experience in a newspaper office and provides the opportunity to acquire and apply skills in news writing, photojournalism, layout, and/or newspaper production. Work sites must be approved by the faculty coordinator. Co-Op job placement assistance is available through the Co-Op office. 120 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (7.00). Prerequisite: COM-201.

**COM-473 Co-Op Work Experience (Journalism) (3.00 cr.)**

This course gives students work experience in a newspaper office and provides the opportunity to acquire and apply skills in news writing, photojournalism, layout, and/or newspaper production. Work sites must be approved by the faculty coordinator. Co-Op job placement assistance is available through the Co-Op office. 180 minimum hours work experience distributed over the semester. Lecture (3.00). Prerequisite: COM-201.

**CRJ – CRIMINAL JUSTICE**

**CRJ-101 Introduction Criminal Justice (3.00 cr.)**

This course analyzes the history, development, and function of the police in a free society. A primary concern in the course is the relationship between the various components of the criminal justice system and the effectiveness of the system as a mechanism for social control. Lecture (3.00).

**CRJ-102 Introduction Corrections (3.00 cr.)**

This course is an overview of the history and philosophical foundations of the American correctional system. This course examines the organization and operation of the correctional system and correctional treatment programs ranging from pre-trial diversion to post-incarceration procedures. The course analyzes current issues and problems in corrections such as social control within prisons, legal rights of prisoners, and alternatives to imprisonment. Lecture (3.00).

**CRJ-103 Criminal Law (3.00 cr.)**

This course is a study of the philosophy and development of the law and development of law of criminal procedure and its constitutional provisions. Topics included in the course are principles of criminal law and the adversary system, police authority, relative to the laws of arrest, search and seizure, and a review of relevant U.S. Supreme Court decisions. CRJ-101

Introduction to Criminal Justice is highly recommended before taking this course. Lecture (3.00).

**CRJ-105 Police Administration (3.00 cr.)**

This course provides a review, analysis, and synthesis of the proactive, traditional scientific, and human relations approaches to police management. The basics of administering a police organization such as recruitment and selection of personnel, training, fiscal and planning operations, and auxiliary and staff functions are reviewed. Changes relative to socioeconomic, political, and technological realities are explored. CRJ-101 Introduction to Criminal Justice is highly recommended before taking this course. Lecture (3.00).

**CRJ-107 Criminology (3.00 cr.)**

This course the criminal justice system with an emphasis on the structure and operation of its components and on the modes of societal responses to crime and criminals. It reviews the development, philosophy, and concepts of criminal law and analyzes the leading theoretical perspectives on criminal behavior and criminal typologies. SOC-101 Introduction to Sociology is highly recommended before taking this course. Lecture (3.00).

**CRJ-108 Topics Criminal Justice (3.00 cr.)**

This course is an Introductory study of major topics in policing, corrections, and the courts, including but not limited to such topics as judicial misconduct, law enforcement stress management, terrorism, criminalities, prison gangs, sex offenders, domestic violence, and suicide by police. Lecture (3.00).

**CRJ-109 Issues in Policing (3.00 cr.)**

This course explores the history and scope of the relationship between the police and the community. Community relationships are examined from psychological and sociological perspectives. The course analyzes police issues such as media relations; citizen grievances; civilian review boards; selection, training, and education of personnel; police professionalism; discretionary use of police authority; police unionism; crime prevention; and the role of women in police agencies. Lecture (3.00).

**CRJ-110 Basic Supervision (Criminal Justice) (3.00 cr.)**

This course examines the first line supervisor as an integral part of the total management team and as one of the cornerstones upon which successful operations rest. The course analyzes the role of the supervisor as a problem solver and as a key link in the communication process. Topics explored in the course are the supervisor's expanded responsibilities for planning, training, developing, and motivating employees; counseling, performance appraisal; decision-making; and leadership. Lecture (3.00).

**CRJ-111 Criminal Investigation (3.00 cr.)**

This course analyzes the essential elements of investigation as a science of inquiry with an emphasis on the legal significance of evidence. Methods of searching for, collecting, preserving, and evaluating physical evidence and the techniques for locating and interviewing witnesses are explored. Organizational investigative functions and the development of an understanding of the crime laboratory and its role in a criminal investigation are also discussed. Lecture (3.00).

**CRJ-112 Crime Prevention (3.00 cr.)**

This course examines opportunity reduction strategy as a predictable and controllable variable in addressing the crime problem. The course emphasizes the role of police as community leaders and explores practical concepts and methods through which community involvement can deter crime. The limitations of the criminal justice system are analyzed and a variety of professional, occupational, and voluntary roles in crime prevention are explored. Lecture (3.00).

**CRJ-113 The Juvenile Justice Process (3.00 cr.)**

This course examines the history, philosophy, and structure of the juvenile justice system with emphasis on changes fostered by US Supreme Court decisions. The course includes an analysis of the nature and the scope of delinquency in terms of causal theories; issues affecting dependent, neglected, and abused children; juvenile crime prevention programs; and the strategic role of the police in developing community resources to serve as alternatives to formal court referral. Lecture (3.00).

**CRJ-114 Correctional Administration (3.00 cr.)**

This course is an introduction to the organization and administration of correctional institutions. The course examines both theoretical and

practical aspects of correctional administration and focuses on such issues as decision-making, ethical values, relations, and authority. CRJ-102 Introduction to Corrections is highly recommended before taking this course. Lecture (3.00).

#### **CRJ-115 Correctional Law (3.00 cr.)**

This course is an overview of the policies and practices that govern correctional institutions. The course examines current legal issues and many court cases that directly impact on prisons and prisoners. CRJ-102 Introduction to Corrections is highly recommended before taking this course. Lecture (3.00).

#### **CRJ-120 Practical Criminal Evidence (3.00 cr.)**

This course focuses on a comprehensive, up-to-date overview of the study of the origin, development, philosophy, and constitutional basis of evidence, constitutional and procedural considerations affecting arrest, search and seizure, kinds and degrees of evidence, and rules governing admissibility, judicial decisions interpreting individual rights, and case studies. Lecture (3.00).

#### **CRJ-125 Introduction to Security (3.00 cr.)**

This course is an examination of the historical, philosophical, and legal bases of security. The course analyzes the role of in today's society, the concept of professionalism, and the relationship between security and law enforcement functions. Such security concerns as unlawful intrusion, retail theft, internal theft, and other crimes, which seriously threaten the business community, are also discussed. The scope and nature of fire prevention and safety are reviewed in a non-technical manner. Lecture (3.00).

#### **CRJ-127 Principles of Loss Prevention (3.00 cr.)**

This course examines the application of the concepts and procedures that serve to prevent losses due to waste, accidents, error, crime, and unethical practices. The emerging professional status of the loss-control manager and his/her attendant responsibilities are discussed. home loss-control technology, electronic security systems, disaster planning, and fire protection and safety are also reviewed. Lecture (3.00).

#### **CRJ-461 Co-Op Work Experience (Criminal Justice) (1.00 cr.)**

This course provides the student with practical, supervised work experience in the various areas of criminal justice work: police agencies, prosecutor's offices, courts, sheriff's offices, and the correction field. Through on-the-job experience, students can acquire the practical expertise and knowledge needed to pursue a career in this field. Students are supervised by a faculty member, and job placement assistance is available through the Cooperative Education Office. 60 minimum hours work experience distributed over the semester Lecture (1.00), Cooperative (3.00). Prerequisite: CRJ-101.

#### **CRJ-462 Co-Op Work Experience (Criminal Justice) (2.00 cr.)**

This course provides the student with practical, supervised work experience in the various areas of criminal justice work: police agencies, prosecutor's offices, courts, sheriff's offices, and the correction field. Through on-the-job experience, students can acquire the practical expertise and knowledge needed to pursue a career in this field. Students are supervised by a faculty member, and job placement assistance is available through the Cooperative Education Office. 120 minimum hours work experience distributed over the semester Lecture (1.00), Cooperative (8.00). Prerequisite: CRJ-101.

#### **CRJ-463 Co-Op Work Experience (Criminal Justice) (3.00 cr.)**

This course provides the student with practical, supervised work experience in the various areas of criminal justice work: police agencies, prosecutor's offices, courts, sheriff's offices, and the correction field. Through on-the-job experience, students can acquire the practical expertise and knowledge needed to pursue a career in this field. Students are supervised by a faculty member, and job placement assistance is available through the Cooperative Education Office. 180 minimum hours work experience distributed over the semester Lecture (1.00), Cooperative (12.00). Prerequisite: CRJ-101.

#### **CRJ-473 Co-Op Work Experience (Security and Loss Prevention) (3.00 cr.)**

This course provides the student with practical, supervised experience in various areas of business and institutional security work. Through on-the-job experience, students acquire some of the practical expertise and knowledge needed to pursue a career in this field. A faculty member

supervises students, and job placement assistance is available through the Cooperative Education Office. 180 minimum hours work experience distributed over the semester Lecture (1.00), Cooperative (12.00). Prerequisite: CRJ-125.

### DAN – DANCE

#### **DAN-102 Ballet (1.00 cr.)**

This course is a study of the language of ballet as an art form with emphasis on traditional, academic, and technical steps and vocabulary. Laboratory (3.00).

#### **DAN-103 Modern Dance (1.00 cr.)**

This course is a study of the technical and choreographic skills of modern dance. Students are assisted in being individually creative through movement. Laboratory (2.00).

#### **DAN-104 Tap Dance (1.00 cr.)**

This course is an introduction to elementary tap skills, terminology and rotation, and beginning combinations and simple routines. Purchase of tap shoes is required. Laboratory (2.00).

#### **DAN-105 Jazz Dance (1.00 cr.)**

This course is a study of various styles, techniques, and vocabulary in the idiom of jazz dance. Laboratory (2.00).

#### **DAN-108 Dance Improvisation (1.00 cr.)**

This course is a guided discovery of the freedom of movement in a medium for the expression and development of ideas. Through the emphasis of space, rhythm, and quality, pieces of choreography are designed. Laboratory (2.00).

### DFT – DRAFTING & DESIGN

#### **DFT-107 Drafting I (2.00 cr.)**

This course is a study of drafting theory and development of drafting skills with an emphasis placed on terminology and used in multi-view projection, sectional views, dimensioning, and pictorial drawing, and computer aided drafting, and architectural drawing. Lecture (1.00), Laboratory (3.00). Corequisite: DFT-210.

#### **DFT-207 Drafting II (3.00 cr.)**

This course introduces the student to basic theory and design techniques used in a semester 'Reverse Engineering' project in which the student produces dimensioned CAD drawings (CAD), tolerance, assembly, perspectives and advanced isometrics. Lecture (2.00), Laboratory (2.00). Prerequisite: DFT-107.

#### **DFT-208 Engineer Graphics I (3.00 cr.)**

This course is designed to acquaint the student with various types of graphic solutions used in solving engineering and drafting problems. Particular attention is given to orthographic projection as it relates to solving graphical space problems. Methods of visualization relating to auxiliary views, lines and planes, and points are explored in detail to help prepare the student for advanced drafting and CAD. Lecture (2.00), Laboratory (2.00). Prerequisite: DFT-107.

#### **DFT-209 Engineer Graphics II (3.00 cr.)**

This course offers the student the opportunity to apply the techniques introduced in Engineering Graphics I. Topics considered include revolution, developments, mining and civil engineering, and contour maps. CAD is used extensively in the solution of many engineering and design problems. Special attention is given to advanced drafting, design, and engineering problems. Lecture (2.00), Laboratory (2.00). Prerequisites: DFT-207 and DFT-208.

#### **DFT-210 Computer Aid Drafting I (3.00 cr.)**

This course introduces the use of computer-aided drafting (CAD) on a PC computer using AutoCAD software. Topics include drawing setup, line drawing, editing, layer creation, display features, and dimensioning. Lecture (2.00), Laboratory (2.00). Prerequisite: DFT-107 or Corequisite: DFT-107.

#### **DFT-211 Computer Aided Drafting II (5.00 cr.)**

This course continues the work of CAD I and covers Intermediate level and advanced CAD skills. Included in this course will be file management,

blocks, attributes, dynamic blocks, external references, parametric drafting, 3D surfaces and solids, rendering and architectural drawings using AutoCAD Architecture. Lecture (3.00), Laboratory (5.00). Prerequisite: DFT-210.

#### **DFT-212 Computer Aided Drafting III (3.00 cr.)**

This course is a hands-on experience where students will develop still or animated photo realistic presentations from 2D or 3D CAD drawings. The course includes a study of light and shading techniques, assigning materials to surfaces, graphics file formats, motion techniques used in animations, and output to both video and hard copy devices. Lecture (2.00), Laboratory (2.00). Prerequisite: DFT-211.

#### **DFT-215 Building Systems (3.00 cr.)**

This course provides an understanding of the basic principles and appropriate application of building service and environmental systems, incorporating thermal exposure, climate modification, environmental systems and energy use with a focus on sustainability as these relate to the building envelope. The course also introduces aspects of plumbing, vertical transportation systems, and life safety in building design. An HVAC project will be assigned. Prerequisites: DFT-107 and DFT-207 Lecture (2.00), Laboratory (2.00). Prerequisites: DFT-107 and DFT-207.

#### **DFT-262 Architectural Drafting (3.00 cr.)**

This course will provide the student with a basic comprehensive study of the field of Residential Architectural Drafting with emphasis on residential construction principles, planning, and specifications. Students will design a residential structure and will prepare a complete set of specifications and construction drawings. Lecture (2.00), Laboratory (2.00). Prerequisites: DFT-207 and DFT-208. Corequisite: DFT-265.

#### **DFT-263 Architectural Design (3.00 cr.)**

This course explores the relationships among the environmental, functional, formal and technological dimensions of architecture. Lecture (2.00), Laboratory (2.00). Prerequisite: DFT-262.

#### **DFT-265 Architectural Practice and Planning (3.00 cr.)**

This course is designed to provide a student with basic practical, technical, and contractual guidelines for working in a professional architectural environment. Among the topics covered are building codes, zoning, plot and site planning, accessible facilities, construction materials, and architectural presentations. Lecture (2.00), Laboratory (2.00). Prerequisites: DFT-207 and DFT-208. Corequisite: DFT-262.

#### **DFT-266 Materials and Methods of Construction (3.00 cr.)**

This course introduces and discusses the construction process and its role in architecture and design. The course discusses major building component systems and methods. Structural theory is also explored. Lecture (2.00), Laboratory (2.00). Prerequisite: DFT-262.

#### **DFT-270 Building Information Modeling (3.00 cr.)**

This course will introduce students to the principles and practice of Building Information Modeling. Course exercises and projects are designed to enrich the students' understanding of the potential of this emerging technology on both a practical and theoretical level. The principal software that we will be currently using for this course is Autodesk Revit Architecture. Many of the terms and concepts covered will be common to other commercial products characterized as Building Information Modelers. Lecture (2.00), Laboratory (2.00). Prerequisite: DFT-262.

#### **DFT-282 Technical Illustration (3.00 cr.)**

This course details the techniques used in the preparation of pictorial technical material for illustration and publication. Advanced drawing techniques in axonometric, oblique, and perspectives are covered, as well as basic shading methods used in illustration. Illustration techniques on CAD are also explored. Lecture (2.00), Laboratory (2.00). Prerequisite: DFT-207.

#### **DFT-461 Co-Op Work Experience (Drafting) (1.00 cr.)**

This course is designed to provide drafting and design students with part-time work experiences so that they may learn and practice under professional guidance in college approved work environments. In addition, weekly seminars are conducted by a college faculty member. Students must apply for these courses through the Co-Op Office, which offers job placement assistance; this application must precede registration for Co-Op

courses. 60 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (3.00). Prerequisite: DFT-207.

#### **DFT-462 Co-Op Work Experience (Drafting) (2.00 cr.)**

This course is designed to provide drafting and design students with part-time work experiences so that they may learn and practice under professional guidance in college approved work environments. In addition, weekly seminars are conducted by a college faculty member. Students must apply for these courses through the Co-Op Office, which offers job placement assistance; this application must precede registration for Co-Op courses. 120 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (8.00). Prerequisite: DFT-207.

#### **DFT-463 Co-Op Work Experience (Drafting) (3.00 cr.)**

This course is designed to provide drafting and design students with part-time work experiences so that they may learn and practice under professional guidance in college approved work environments. In addition, weekly seminars are conducted by a college faculty member. Students must apply for these courses through the Co-Op Office, which offers job placement assistance; this application must precede registration for Co-Op courses. 180 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (12.00). Prerequisite: DFT-207.

### DHY – DENTAL HYGIENE

#### **DHY-101 Oral Hygiene I (3.00 cr.)**

This is the foundation course for clinical dental hygiene practice. Students are introduced to assessment, treatment planning, instrumentation and documentation skills utilizing interactive clinical laboratory sessions and computer assisted learning. Lecture (1.00), Laboratory (6.00). Corequisites: DHY-108, DHY-109, and BIO-104.

#### **DHY-108 Dental and Oral Anatomy and Physiology (2.00 cr.)**

This course examines the anatomy and physiology of the teeth and oral structures. Emphasis is on identification of primary and permanent teeth, classification of occlusion, and description and location of anatomical structures of the head and neck. Dental terminology is defined and related to oral structures through the utilization of dental model devices; computer assisted learning and interactive laboratory sessions. Lecture (1.00), Laboratory (4.00). Corequisites: DHY-101 and DHY-109.

#### **DHY-109 Oral Embryology and Histology (2.00 cr.)**

This course is a comprehensive study of orofacial embryology and the cellular structure of dental and associated glandular and mucosal issues. Emphasis is on clinical considerations of the developmental process to be relevant to dental hygiene practice. The relationship between structure and function will be stressed using microscopic and clinical visuals. Lecture (2.00). Corequisites: DHY-101 and DHY-108.

#### **DHY-200 Pharmacology for Dental Hygiene (2.00 cr.)**

This course examines medications routinely prescribed for medical and dental conditions and the role of the dental hygienist in patient assessment and treatment planning. Systemic medications, complementary medicine, anesthesia, and oral pharmacotherapy will be included. Local anesthetic agents will be emphasized. Lecture (2.00). Prerequisites: DHY-101, DHY-201, DHY-205, DHY-207, and DHY-209. Corequisite: CHM-110.

#### **DHY-201 Oral Hygiene II (3.00 cr.)**

This course focuses on providing clinical dental hygiene care to patients throughout the lifespan. The course incorporates age-targeted prevention, culture competence, preventive therapies, clinical technologies and an introduction to soft tissue management. Opportunities for community oral health education are included. Lecture (1.00), Laboratory (8.00). Prerequisites: BIO-104, BIO-109, DHY-101, DHY-108, and DHY-109.

#### **DHY-202 Oral Hygiene III (4.00 cr.)**

This course is a continuation and refinement of the clinical therapies integrated in Oral Hygiene II. Special needs patients, oral rehabilitation and clinical technologies are the focus of this course. Both on-campus and off-campus clinical experiences are incorporated. Lecture (1.00), Laboratory (12.00). Prerequisites: BIO-104, BIO-209, DHY-201, DHY-205, DHY-200, DHY-220, and DHY-209.

#### **DHY-203 Oral Hygiene IV (4.00 cr.)**

This course is an advanced study of the clinical therapies introduced in Oral Hygiene III. Practice management, clinical technologies, ethics, community

outreach, and preparation for dental hygiene licensing are incorporated into this course. Lecture (1.00), Laboratory (12.00). Prerequisites: DHY-200, DHY-202, DHY-204, DHY-207, DHY-219, DHY-220, and DHY-206.

#### **DHY-204 Dental Materials (2.00 cr.)**

This course is a comprehensive study of the science, technology, and application of dental materials incorporating reality based dental environment treatment modality scenarios to enhance and compliment both classroom and clinical setting course content. Particular emphasis is placed on various dental material and their specific uses, along with related fundamental and specialty clinical dental hygiene skills. Specific dental materials are stressed and utilized throughout the didactic, laboratory, and clinical components of the course. Lecture (1.00), Laboratory (4.00). Prerequisites: BIO-209, DHY-108, DHY-109, DHY-201, DHY-207, and CHM-110.

#### **DHY-205 Dental Radiology (3.00 cr.)**

This course provides the dental hygiene student with an introduction to the principles and practices of dental radiology. Emphasis is placed on radiographic imaging techniques, film-processing procedures, identification of anatomical landmarks and radiographic interpretation. Course content includes an overview of radiation history, physics, biology, protection, quality assurance and risk management. Lecture (2.00), Laboratory (3.00). Prerequisites: BIO-104, BIO-109, DHY-101, DHY-108, and DHY-109.

#### **DHY-206 Community Oral Health I (2.00 cr.)**

This partially online course will examine public health/community health issues. It will focus on the role of the dental hygienist in community -based oral health care initiatives. This will include assessment, planning, implementation, and evaluation of public health/community issues. Health care delivery at local, national, and global levels will be discussed including agencies involved in the delivery and finance of oral health services. Lecture (2.00). Prerequisites: BIO-209, DHY-108, and DHY-109.

#### **DHY-207 General and Oral Pathology (3.00 cr.)**

This course examines the relationship between systemic disease and the oral cavity. The course will focus on the understanding of disease process, recognition of deviations from normal and the differential diagnosis of oral manifestations. Computer assisted learning and clinical case studies will be integrated. Lecture (3.00). Prerequisites: BIO-209, DHY-200, DHY-201, DHY-205, DHY-209, and DHY-220.

#### **DHY-209 Periodontology I (1.00 cr.)**

This course is the study of the principles and concepts of periodontal disease including the tissues surrounding the teeth in both healthy and diseased states. Soft tissue management, periodontal therapies and case management are discussed. The role of systemic disease and periodontal health is also addressed. Lecture (1.00). Prerequisites: BIO-209, DHY-108, DHY-201, DHY-205, and DHY-207.

#### **DHY-210 Oral Hygiene Enhanced Clinical Techniques (1.00 cr.)**

This course is designed to provide clinical experience for either the student returning to the program after an extended absence or the student in need of further clinical skill development. Permission from the Dental Hygiene Academic Department Chair. This course is for students in need of additional clinical skill development and is not a requirement for all dental hygiene students. Lecture (3.00). Prerequisites: DHY-101, DHY-108, DHY-109, DHY-201, DHY-205, DHY-207, and BIO-109.

#### **DHY-214 Nutrition Dental Health (2.00 cr.)**

This course explores basic nutrition as it applies to general and oral health. Students learn to identify patients with dietary and nutritional deficiencies, provide nutritional counseling treatment plans, and adapt behavioral modification techniques. Lecture (2.00). Prerequisites: CHM-110 and DHY-202.

#### **DHY-216 Community Oral Health II (1.00)**

This partially online course will provide students with an opportunity to engage in a community health experience over the course of the semester and apply the principles of Community Oral health I to a practicum project. Laboratory (2.00) Prerequisites: DHY-202, DHY-204, DHY-205, DHY-220, DHY-206, DHY-207, and DHY-219.

#### **DHY-219 Periodontology II (1.00 cr.)**

This course is an advanced study of the disease process and treatment modalities for periodontal disease. Emphasis is placed on the dental

hygienists' role in developing soft tissue management programs including initial therapy, maintenance and evaluation of oral health. Implants, periodontal surgery and oral rehabilitation are also integrated. Case studies, integration of clinical therapies and computer assisted learning are used. Lecture (1.00). Prerequisites: DHY-201, DHY-205, DHY-209, and BIO-209.

#### **DHY-220 Local Anesthesia for Dental Hygienists (1.00 cr.)**

This course is designed to provide the student with the necessary knowledge and skills to administer local anesthesia properly to patients who require pain management during dental hygiene treatment. Special emphasis will be given to the pharmacology of local anesthetic and pain control, injection fundamentals, and the clinical administration of local anesthesia. Local and systemic complications along with legal considerations will also be presented. Lecture (1.00) Prerequisites: DHY-201, DHY-205, DHY-209, and BIO-209. Corequisite: DHY-200.

### **DMS – DIAGNOSTIC MEDICAL SONOGRAPHY**

#### **DMS-101 Ultrasound Physics and Instrumentation I (Fall Only) (2.00 cr.)**

This course will provide the student with the relevant fundamental physical principles as well as the basic instrumentation used in diagnostic ultrasound. Modes of operation, imaging and display techniques that relate to high-frequency sound production will be stressed. Lecture (1.00), Laboratory (3.00). Corequisites: DMS-102, DMS-113, and DMS-115.

#### **DMS-102 Clinical Medicine and Patient Care (Fall Only) (2.00 cr.)**

This course will enable the student to provide quality patient care while demonstrating the application of technical skills needed to perform ultrasound procedures. Medical term definitions will also be presented and practical applications of medical terminology will be covered. An understanding of pertinent emergency care, patient psychology, medical ethics and management skills will be presented. Lecture (2.00). Corequisites: DMS-101, DMS-113, and DMS-115.

#### **DMS-113 Abdominal Sonography I (Fall Only) (3.00 cr.)**

This course is a comprehensive study of abdominal structures with an emphasis on specialty organ examinations. Knowledge of the diagnosis, history and physical findings, as they pertain to the pathophysiology of abdominal organs and systems is presented. Normal and abnormal tissue patterns are included within the discussions. Students will practice scanning in the lab in preparation for objectives required in Ultrasound Clinic I. Lecture (2.00), Laboratory (3.00). Corequisites: BIO-109, DMS-101, DMS-102, and DMS-115.

#### **DMS-115 Cross-Sectional Anatomy (Fall Only) (4.00 cr.)**

This course involves the study of the structure and function of human anatomy in the cross sectional mode. Topics will include the circulatory system, abdomen, thorax, cranium, pelvis, reproductive system and retroperitoneum. Fetal cross-sectional anatomy will also be presented. The course content will be presented through lectures, discussion, and laboratory exercises. Lecture (3.00), Laboratory (3.00). Corequisites: BIO-109, DMS-101, DMS-102, and DMS-113.

#### **DMS-201 Ultrasound Physical and Instrumentation II (Spring Only) (2.00 cr.)**

This course is a continuance of the study of the physical principles of diagnostic ultrasound. Emphasis will be placed on hemodynamics, Doppler ultrasound, image artifacts, bioeffects, safety, and quality assurance. Advanced instrumentation will also be presented. Lecture (1.00), Laboratory (3.00). Prerequisites: DMS-101, DMS-102, DMS-113, and DMS-115. Corequisites: DMS-204, DMS-205, DMS-213, and DMS-218.

#### **DMS-204 Introduction to Medical Imaging (Spring Only) (1.00 cr.)**

This course is a comprehensive course pertaining to different procedures that exist in the Radiology Department. It is an introduction to different modalities and how they interrelate to one another. Special tests will be introduced in each modality with emphasis on correlation with ultrasound exams. The course will be divided into certain organ systems and the modalities that are useful in determining certain abnormalities. Students will be shown how different modalities utilize patient testing and the importance of the modality. Topics are chosen according to certain ultrasound procedures. Lecture (1.00). Prerequisites: DMS-102, DMS-113, and DMS-115. Corequisites: DMS-201, DMS-205, DMS-213, and DMS-218.

**DMS-205 Obstetric and Gynecological Sonography (Spring Only) (3.00 cr.)**

This course is designed to familiarize students with the pathophysiology of the female reproductive system, gynecological anomalies and normal and abnormal first trimester pregnancy. Pelvic scanning protocol will also be discussed and sonographic interpretation will be utilized. Recognizing the normal and abnormal sonographic patterns in gynecology and first trimester pregnancy will be covered. Pathological and/or physiological data for the interpretation by physicians is stressed. The sonographic criteria for evaluation of the gravid uterus and fetus will be demonstrated. Lecture (2.00), Laboratory (3.00). Prerequisites: BIO-109, DMS-102, DMS-113, and DMS-115. Corequisites: DMS-201, DMS-204, DMS-213, and DMS-218.

**DMS-213 Abdominal Sonography II(Spring Only) (3.00 cr.)**

This course is a continuance of Abdominal Sonography I in studying abdominal structures where an emphasis is placed on specialty organ examinations. Knowledge of the diagnosis, history, and physical findings as they pertain to the pathophysiology of abdominal and small organs is presented. Normal and abnormal tissue patterns are included within this course. Students will practice and master a full abdominal procedure in the lab to prepare them for Ultrasound Clinic II-Abdomen rotation. Lecture (2.00), Laboratory (3.00). Prerequisites: BIO-109, DMS-102, DMS-113, and DMS-115. Corequisites: DMS-201, DMS-204, DMS-205, and DMS-218.

**DMS-214 Echocardiography (Fall Only) (3.00 cr.)**

This course is an introduction to cardiovascular principles. Topics covered will be anatomy and physiology, pathophysiology, patient assessment that includes palpation and auscultation of the heart and arteries, cardiovascular medications, surgical intervention and interpretation of electrocardiograms. Students will also learn how to perform a limited echo procedure in an attempt to prepare them for Vascular Practicum IV. Lecture (2.00), Laboratory (3.00). Prerequisites: BIO-209, DMS-201, and DMS-219. Corequisites: DMS-220 and DMS-229.

**DMS-218 Ultrasound Clinic I (Spring Only) (1.00 cr.)**

This course requires the student to spend two days a week in an approved hospital Ultrasound Department. Students will perform limited abdominal and pelvic procedures under the direct supervision of the supervising sonographer. Students are given specific learning objectives for the rotation. Progress is evaluated according to a competency-based clinical education system. Clinical = (16.00). Prerequisites: DMS-101, DMS-102, DMS-113, and DMS-115. Corequisites: DMS-201, DMS-204, DMS-205, and DMS-213.

**DMS-219 Ultrasound Clinic II - Abdomen (2.00 cr.)**

This course requires the student to spend five days a week in an approved hospital Ultrasound Department. Students will perform complete abdomen procedures under the direct supervision of the supervising sonographer. Students are given specific learning objectives for the rotation. Progress is evaluated according to a competency-based clinical education system. Clinical (40.00). Prerequisites: DMS-204, DMS-205, DMS-213, and DMS-218.

**DMS-220 Ultrasound Clinic III - Ob/Gyn (Fall Only) (2.00 cr.)**

This course requires the student to spend two days a week in an approved hospital Ultrasound Department. Students will perform pelvic and obstetrical procedures under the direct supervision of the supervising sonographer. Students are given specific learning objectives for the rotation. Progress is evaluated according to a competency-based clinical education system. Clinical (16.00). Prerequisites: DMS-205, and DMS-219. Corequisite: DMS-226.

**DMS-221 Ultrasound Clinic IV - Echocardiography (Spring Only) (2.00 cr.)**

This course requires the student to spend two days a week in an approved ultrasound department. Students will perform venous and arterial procedures under the direct supervision of the supervising sonographer. Students are given specific learning objectives for the rotation. Progress is evaluated according to a competency-based clinical education system. Clinical (16.00). Prerequisites: DMS-214, DMS-220, DMS-226, and DMS-229. Corequisite: DMS-227.

**DMS-222 Ultrasound Clinic V - Vascular (Summer) (1.00 cr.)**

This course requires the student to spend five days a week in an approved ultrasound department. Students will perform venous and arterial procedures under the supervision of the designated clinical instructor.

Students are given specific learning objectives for the rotation. Progress is evaluated according to a competency-based clinical education system. Clinical (200 hours over the summer session). Prerequisites: DMS-221 and DMS-227. Corequisite: DMS-230.

**DMS-226 OB Sonography II (Fall Only) (3.00 cr.)**

This course is a continuance of OB/GYN Sonography designed to familiarize the students with the pathophysiology of the female reproductive pelvic scanning protocol will also be discussed and sonographic interpretation will be utilized in the labs. Normal and abnormal obstetrical patterns will be taught, and emphasis is placed on recognizing the essential sonographic appearance when doing an obstetrical exam in 2nd and 3rd trimester. Chromosomal and congenital anomalies are discussed and the importance of the differential diagnosis. Level II and high-risk OB ultrasounds are presented. Pathological and/or physiological data for the interpretation by physicians is stressed. The sonographic criteria for evaluation of the gravid uterus, postpartum uterus and the fetus will be demonstrated. Lecture (2.00), Laboratory (3.00). Prerequisites: BIO-209, DMS-205, and DMS-219. Corequisites: DMS-214 and DMS-220.

**DMS-227 Echocardiography II (Spring Only) (3.00 cr.)**

This course is a continuance of Echocardiography, explaining the normal anatomy and physiology of the adult heart. A more in-depth analysis of the physiology/hemodynamics of the heart chambers and muscles are emphasized. Doppler flow patterns and sonographic evaluation of the abnormal heart will be stressed. New techniques as an adjunct tool to Echocardiography will be discussed. Students will perform a complete echo exam in lab in preparation for Vascular Practicum IV. Cardiac measurements of the chambers and muscles will be covered. Lecture (2.00), Laboratory (3.00). Prerequisites: DMS-226 and DMS-229. Corequisites: DMS-221 and DMS-228.

**DMS-228 Advanced Ultrasound Practices (Spring Only) (1.00 cr.)**

This course is designed to explore new specialty techniques in the areas of Abdomen, Obstetrics and Gynecology and Echocardiography. Intraoperative procedures will be discussed in all specialties. Specialized equipment will also be emphasized. The course will also focus on legal and ethical issues in sonography. Review of case presentations will be discussed. Independent learning assignments and various lecture formats will enhance the course. Journal articles will be introduced. Neurosonography will be stressed to include normal and abnormal sonographic findings. Laboratory (3.00). Prerequisites: DMS-226 and DMS-229. Corequisites: DMS-221 and DMS-227.

**DMS-229 Vascular Imaging (Fall Only) (2.00 cr.)**

This course introduces the use of diagnostic imaging with the use of Doppler for examining the vasculature of the human body. In this class the student will learn about diseases that affect the circulatory system. The course provides a history of diagnosis and treatment of vascular conditions. In addition, the course gives the student an awareness of alternative diagnostic tools used in conjunction with ultrasound. The student will learn how to perform vascular tests commonly performed in vascular laboratories and develop an awareness of tests that are routinely performed. Lecture (1.00), Laboratory (3.00). Prerequisites: BIO-209, DMS-201, and DMS-213. Corequisites: DMS-214 and DMS-220.

**DMS-230 Comprehensive Review (Summer) (3.00 cr.)**

This course will review specialty areas pertinent to sonography in preparation for the ARDMS exam. Emphasis will be placed on ultrasound physics, general and cardiac concentrations. Upon completion of the program, students are eligible to take the ARDMS exams in Abdomen, Ob/Gyn, and Adult Echocardiography. The matrix of ARDMS exams for Abdomen, Obstetrics and Gynecology, and Adult Echocardiography will be followed. Seventy percent of the matrix on all specialties will be reviewed. The remaining 30% will be presented in the program courses specifically focused on the specialties mentioned. Students are required to pass the exit examination in all three specialties as a requirement for program eligibility to take the ARDMS exams. Lecture (3.00). Prerequisites: DMS-227 and DMS-228. Corequisite: DMS-222.

**EBS – ENGLISH BASIC SKILLS****EBS-011 Developmental Skills I (5.00 cr.)**

This course is the first part of a two-course basic skills sequence designed to improve fundamental academic skills in the areas of reading, writing, and critical thinking. Class instruction emphasizes the development of writing

skills, literal and interpretive comprehension of reading texts, sentence structure, grammar and punctuation, and vocabulary. At least 50 minutes per week of this five-hour course meets in a computer lab where there is opportunity for individualized instruction. Lecture (5.00).

#### **EBS-012 Developmental Skills II (5.00)**

This course is the second part of a two-course basic skills sequence designed to improve fundamental academic skills in reading, writing, and critical thinking for students who have not demonstrated mastery in all skill areas introduced in Developmental Skills I. Class instruction emphasizes the development of paragraph and essay writing skills, reading comprehension, sentence structure, grammar and punctuation, and vocabulary. At least 50 minutes per week of this five-hour course meets in a computer lab where there is opportunity for individualized instruction. Lecture (5.00).

#### **EBS-021 English Skills I (5.00)**

This course is a one-semester course designed to improve fundamental academic skills in reading, writing, and critical thinking. Class instruction emphasizes the development of paragraph and essay writing skills, reading comprehension, sentence structure, grammar and punctuation, and vocabulary. At least 50 minutes per week of this five-hour course meets in a computer lab where there is opportunity for individualized instruction. Lecture (5.00)

#### **EBS-031 Directed Studies Writing (1.00 cr.)**

This course is required for students whose scores on the Basic Skills Placement Test indicate a need for intensive instruction in writing. Personalized instruction designed to support the students' activities in English Composition I is offered in this course. Lecture (1.00). Corequisite: WRT-101.

### **ECO – ECONOMICS**

#### **ECO-101 Macroeconomics (3.00 cr.)**

This course is the study of resources, scarcity, income, employment, banking, government involvement, international trade and international payments in the economy of the United States. This course explores the different macroeconomic theories that seek to explain economic behavior and the economic tools available to the government in its efforts to achieve full employment, stable prices, and economic growth, and the equitable distribution of income. >General Education Course. Lecture (3.00).

#### **ECO-105 Labor Economics (3.00 cr.)**

This course is an analysis of the United States labor market. The course examines labor market theory; the imperfections, structures, institutions, and programs that are part of the labor market today; and trends and innovations related to market performance and its matching of people with jobs. Topics discussed include employment, unemployment, government policy, labor and management interaction, and the relationship of the labor market to the performance of the larger economy. Lecture (3.00).

#### **ECO-201 Microeconomics (3.00 cr.)**

This course is the study of price theory, elasticity, factor markets, market power, competition, pollution, and international trade. >General Education Course. Lecture (3.00). Prerequisite: ECO-101.

#### **ECO-461 Co-Op Work Experience (Economics) (1.00 cr.)**

This course provides the student with practical work experience in the area of economics. Students are supervised by a faculty member, and job placement assistance is available through the Cooperative Education Office. Lecture (1.00), Cooperative (3.00). Prerequisite: ECO-101.

#### **ECO-462 Co-Op Work Experience (Economics) (2.00 cr.)**

This course provides the student with practical work experience in the area of economics. Students are supervised by a faculty member, and job placement assistance is available through the Cooperative Education Office. Lecture (1.00), Cooperative (8.00). Prerequisite: ECO-101.

#### **ECO-463 Co-Op Work Experience (Economics) (3.00 cr.)**

This course provides the student with practical work experience in the area of economics. Students are supervised by a faculty member, and job placement assistance is available through the Cooperative Education Office. Lecture (1.00), Cooperative (12.00). Prerequisite: ECO-101.

### **EDU – EDUCATION**

#### **EDU-101 Introduction to Education (3.00 cr.)**

This course is a study of the social, historical, and philosophical principles and foundations of American education. Lecture (3.00).

#### **EDU-102 Introduction to Special Education (3.00 cr.)**

This course provides an overview of the foundations, objectives, history, programs, curriculum, practices and legislation pertaining to education for children with special needs. Cognitive and physical disabilities, including pedagogical techniques, are examined. Lecture (3.00).

#### **EDU-103 Principles Practices in Education (3.00 cr.)**

This course is an application of educational theory and research to classroom teaching situations. Group dynamics techniques, learning theories, methods of measurement and evaluation, and problem solving strategies are studied. Lecture (3.00).

#### **EDU-110 Foundations of Multicultural Education (3.00 cr.)**

This course develops knowledge, skills, and attitudes required for teaching students from diverse cultural and linguistic backgrounds. This course further defines concepts presented in social science courses, such as World Geography, Sociology, Anthropology, Economics, and Political Science from the perspective of diverse societies. Lecture (3.00)

#### **EDU-120 Early Childhood Education I (3.00 cr.)**

This course provides an overview of the basic principles and concepts of early childhood education. The needs and abilities of young children are analyzed, and directed observations are made in early childhood education programs. Lecture (3.00).

#### **EDU-124 Curriculum Materials and Methods (3.00 cr.)**

This course is designed to assist the student in the creation, evaluation, and organization of curriculum materials appropriate for young children. Students plan and develop curricula in the languages and creative arts. Lecture (3.00).

#### **EDU-126 Developing and Implementing Curriculum (3.00 cr.)**

This course is designed to provide students with the experience of planning a total curriculum in early childhood education. Students plan and develop curricula in mathematics, science, and social studies. Lecture (3.00).

#### **EDU-130 Infants and Toddlers in Early Childhood (3.00 cr.)**

This course surveys the psychological and educational development of infants and toddlers. Program development in the childcare setting is explored. Existing program models in infant-toddler education are studied. Lecture (3.00).

#### **EDU-132 Parenting Very Young Children (Birth to 6 Years Old) (3.00 cr.)**

This course is a study of parental involvement with children, the amount and quality of parent-child interaction, the psychosocial development of young children, personnel placement in early childhood programs, and school-home communication. Lecture (3.00).

#### **EDU-220 Early Childhood Education II (3.00 cr.)**

This course examines current and critical issues in the field of early childhood education. These issues are explored via current readings and specialized projects. Lecture (3.00). Prerequisite: EDU-120.

#### **EDU-222 Supervised Field Work Experience I (2.00 cr.)**

This course is a weekly three-hour placement intern at an assigned school site. Training and supervision occur in basic curricular areas. The student intern assists the teacher with daily routines and assumes responsibility for planning curricular activities. This course must be taken in conjunction with Field Work Seminar I. Lecture (3.00). Corequisites: EDU-124 and EDU-223.

#### **EDU-223 Field Work Seminar I (2.00 cr.)**

This course serves as a forum for the discussion of students' field experience. Field experiences are critically evaluated by both students and supervising teachers. Attention is given to the necessary components of classroom management. Lecture (2.00). Corequisites: EDU-124 and EDU-222.

**EDU-224 Supervised Field Work Experience II (2.00 cr.)**

This course is a continuation of Supervised Field Work Experience I. The field placement is at a different site with a different age group than that assigned in Supervised Field Work Experience I. This course must be taken in conjunction with Field Work Seminar II. Lecture (3.00). Prerequisite: EDU-222. Corequisite: EDU-225.

**EDU-225 Field Work Seminar II (2.00 cr.)**

This course is a continuation of Field Work Seminar I. Additional areas considered are certification, job placement, and educational options beyond the A.A.S. Degree. Lecture (2.00). Prerequisite: EDU-223. Corequisite: EDU-224.

**EDU-461 Co-Op Work Experience (Education) (1.00 cr.)**

This course is designed to provide students with opportunities for observation and participation in classrooms in elementary, middle and secondary school learning environments. This structured field-based experience also allows students the opportunity to interview teachers whose classrooms they observe. Students have opportunities to interact with children and apply concepts learned in EDU-101. Student interactions include assessment of learning environments, student learning, tutoring, and small group instruction. Lecture (1.00), Cooperative (3.00). Prerequisite: EDU-101.

**ELC – ELECTRICAL TECHNOLOGY****ELC-100 Introduction Electronics Technology (2.00 cr.)**

This course presents an orientation to the various subspecialties within the field, their interrelationships, and their range of applications. The course also covers Introductory topics in electrical and electronics drafting, computer-aided circuit analysis, and electronic fabrication. Lecture (1.00), Laboratory (2.00).

**ELC-101 DC-Circuit Analysis (4.00 cr.)**

This course includes Ohm's and Kirchhoff's laws for analysis of series, parallel, and series/parallel circuits, and Thevenin and Norton's theorems for multiple-loop circuits. Capacitance and inductance transient behavior is also studied, as well as branch, mesh, and node analysis. Lecture (3.00), Laboratory (3.00).

**ELC-110 Electric Power Technology (4.00 cr.)**

This course covers the basics of power systems for residential, commercial, and industrial applications from a practical viewpoint. Lecture (3.00), Laboratory (3.00).

**ELC-120 Photovoltaic Systems Technology (3.00 cr.)**

This course covers the basics of how to site, design, and install photovoltaic (PV) systems. Topics include shading, the orientation of arrays, sizing for grid-connected and off-grid systems, design of systems for a given electrical load, safety practices for installers and the requirements of the National Electrical Code (NEC.) A PV system will be assembled and installed in class. This course can serve as a pre-requisite for the North American Board of Certified Energy Practitioners (NABCEP.) Lecture (2.00), Laboratory (2.00).

**ELC-201 AC-Circuit Analysis (4.00 cr.)**

This course introduces sinusoidal inputs and time response of RL, RC, and RLC circuits. Network theorems for AC-circuits are covered, as well as resonance, filters, and pulse response of reactive circuits. Lecture (3.00), Laboratory (3.00). Prerequisite: ELC-101.

**ELC-203 Electronics I (4.00 cr.)**

This course is an introduction to the fundamental concepts and applications of solid-state devices. Lecture (3.00), Laboratory (3.00). Corequisite: ELC-201.

**ELC-204 Electronics II (4.00 cr.)**

This course is the second course in a two-course sequence in electronics. It builds upon the first course with a study of solid-state voltage and power amplifiers, emitter followers, field-effect transistors and circuits, thyristors, frequency effects, and op-amps. Lecture (3.00), Laboratory (3.00). Prerequisite: ELC-203.

**ELC-214 Communication Systems I (4.00 cr.)**

This course emphasizes the application of electronic communication theory to practical systems. This first course of a two-course sequence covers AM

and FM systems, television, and telephone. Digital and data communication will be introduced, and continued in Communication Systems II. Lecture (3.00), Laboratory (3.00). Corequisite: ELC-204.

**ELC-215 Communication Systems II (4.00 cr.)**

This course follows the first course in this sequence, continuing work in digital and data communication, and then covers transmission lines, radio wave propagation, antennas, microwave systems, satellite communications, fiber-optic systems, and cellular communication systems. Lecture (3.00), Laboratory (3.00). Prerequisite: ELC-214.

**ELC-462 Co-Op Work Experience (Electronics) (2.00 cr.)**

This course provides the student with practical, supervised work experience in the field of electronic engineering technology. Through on-the-job experience, students can acquire valuable practical knowledge and skills to pursue a related career. Students are supervised by a faculty member and job placement assistance is available through the Co-Op Office. Lecture (1.00), Cooperative (8.00). Prerequisite: ELC-214.

**ENV – ENVIRONMENTAL TECHNOLOGY****ENV-108 Hazardous Waste Site Operations (3.00 cr.)**

This course combines classroom and hands-on fieldwork to teach the student how to operate safely and within the OSHA 1910.120 (HAZWOPER) regulations. The course examines occupational health and safety issues, medical surveillance programs, site health and safety plans, emergency response plans, adequate illumination and sanitation, hazard communication, and rights and responsibilities of employers and employees under OSHA and EPA laws. Lecture (3.00).

**ENV-109 Environmental Policy Compliance and Regulation (3.00 cr.)**

This course deals with environmental policy compliance, environmental studies, and public policy. This course provides insight into the workings of government that are necessary for the formation of public policy. The course examines environmental policy in the United States in air, water, land use, agriculture, industry, energy, waste disposal, and other areas and provides an introduction to the policy and decision making process. Lecture (3.00).

**ENV-112 Environmental Health (3.00 cr.)**

This course addresses a wide range of environmental issues, including prediction and management of environmental impacts, management of renewable resources, protection or restoration of species and ecosystems and use of generic ecological studies to promote understanding of classes of environmental problems. Case studies will exemplify how laws, regulations and treaties impact with decisions made concerning environmental quality. Lecture (3.00).

**ENV-113 Human Environment (3.00 cr.)**

This course enables students to understand human interaction and impact on their environment. Students apply their skills and knowledge to understand more practical information about their environment. The context and interdisciplinary content of this hands-on course will be powerful and can be used in a variety of ways. Students are able to apply practical knowledge of the environment to everyday personal, business and government related decisions. Lecture (3.00).

**ENV-114 Environmental Field Experience (1.00 cr.)**

This course is a planned educational experience held at a regional Environmental Education Field Center. This course supports and supplements the theoretical and scientific foundations communicated in the Environmental Technology Program. Specific environmental issues or problems are addressed, experienced and analyzed on site. The course contributes to the development of more positive attitudes and values towards the environment. Laboratory (2.00).

**ENV-121 Environmental Microbiology (4.00 cr.)**

This is a course concerning bacteria and other microorganisms and their role in the environment. Topics include an introduction to microorganisms and their physiology, soil microbiology, cycles of the elements, aquatic microbiology, sewage treatment, bioremediation, and applied microbiology encompassing food microbiology, industrial microbiology and biotechnology. Lecture (3.00), Laboratory (3.00).

**ENV-122 Environmental Chemistry (4.00 cr.)**

This course introduces students to the fundamental principles in air pollution technology, water and wastewater technology, and solid/hazardous waste technology. Each area of study will be presented with an emphasis on the following operations: EPA/NJDEP protocol in data collection and analysis, and the application of modern instrumentation to environmental systems. Current trends in environmental technology, such as natural attenuation, waste reduction and environmental engineering are discussed. Lecture (3.00), Laboratory (3.00).

**ENV-461 Co-Op Work Experience (Environmental Technology) (1.00 cr.)**

This course provides the student with practical, supervised work experience in the various fields of environmental technology. Through on-the-job experience, students can acquire the practical expertise and knowledge needed to pursue a career in this field. Students are supervised by a faculty member, and job placement assistance is available through the Co-Op office. Lecture (1.00), Cooperative (3.00). Prerequisites: WRT-101, CHM-100, BIO-101, and TEC-180.

**ENV-462 Co-Op Work Experience (Environmental Technology) (2.00 cr.)**

This course provides the student with practical, supervised work experience in the various fields of environmental technology. Through on-the-job experience, students can acquire the practical expertise and knowledge needed to pursue a career in this field. Students are supervised by a faculty member, and job placement assistance is available through the Co-Op office. Lecture (1.00), Cooperative (8.00). Prerequisites: WRT-101, CHM-100, BIO-101, and TEC-180.

**ENV-463 Co-Op Work Experience (Environmental Technology) (3.00 cr.)**

This course provides the student with practical, supervised work experience in the various fields of environmental technology. Through on-the-job experience, students can acquire the practical expertise and knowledge needed to pursue a career in this field. Students are supervised by a faculty member, and job placement assistance is available through the Co-Op office. Lecture (1.00), Cooperative (12.00). Prerequisites: WRT-101, CHM-100, BIO-101, and TEC-180.

**ENV-464 Co-Op Work Experience (Environmental Technology) (4.00 cr.)**

This course provides the student with practical, supervised work experience in the various fields of environmental technology. Through on-the-job experience, students can acquire the practical expertise and knowledge needed to pursue a career in this field. Students are supervised by a faculty member, and job placement assistance is available through the Co-Op office. Lecture (1.00), Cooperative (16.00). Prerequisites: WRT-101, CHM-100, BIO-101, and TEC-180.

**FIR – FIRE SCIENCE****FIR-101 Introduction to Fire Protection (3.00 cr.)**

This course is an introduction to the field of fire science, and such will provide an overview of fire protection, fire prevention, fire suppression and the scientific nature of fire. Students will learn the principles relevant to hazard control, structural design, fire detection, extinguishment, and limitation of loss. Lecture (3.00).

**FIR-102 Fundamentals Fire Prevention/Fire Inspection I (3.00 cr.)**

This course is an introduction to the study of the basic principles of fire prevention and inspection. Students will learn to utilize the tools necessary to perform inspections, properly make citations, and oversee corrective action. Emphasis of the course is to develop competency in basic fire code enforcement through proficient use of the New Jersey Uniform Fire Code and referenced standards. Lecture (3.00).

**FIR-103 Buildings Codes and Standards (3.00 cr.)**

This course covers the basic principles of building codes and standards. The focus of the course is the nexus between building construction and design, and contemporary problems faced by fire organizations. Lecture (3.00).

**FIR-104 Fire Tactics and Strategy (3.00 cr.)**

This course provides an in-depth analysis of the principles of fire control through utilization of personnel, equipment, and extinguishing agents on the

fire ground. Emphasis is on pre-fire planning, fire ground problem solving, and decision-making in support of tactical deployment and strategic use of available resources. Lecture (3.00).

**FIR-105 Fire Administration (3.00 cr.)**

This course is an introduction to organization and management of fire departments. The course will cover basic managerial concepts and principles of organizational structure, management, and supervisory techniques utilized in the fire service. The focus of the course will be on the company officer. Lecture (3.00).

**GAM - GAMING****GAM-110 Introduction to Game Architecture and Design (3.00 cr.)**

This course introduces the student to the fundamentals of game architecture and design through critique of game play, interactive assignments, and culminating with the creation of an original game design document. Game design concepts include storytelling and narrative, game worlds and settings, game play, character development, audio, game art, level design and the user interface. Also covered are video game history, status of the game development industry and associated careers and the game development process. Lecture (3.00).

**GAM-111 Game Programming 2D (3.00 cr.)**

This course introduces the student to fundamental game programming concepts including managing data, control structures, input/output, and functions. Game production topics include animation, sound effects, sprite movement, collisions, player control, user interface controls, and splash screens. Students will plan, design and test game elements that implement these concepts. Lecture (2.00), Laboratory (2.00). Corequisites: CIS-165, INF-145, INF-153, INF-152.

**GAM-211 Game Development 2D (3.00 cr.)**

This course allows students to continue to develop their game programming knowledge and skills by planning, designing, implementing and testing complete games. Student knowledge of 2D scripting languages will be expanded to include high score storage techniques, timers, physics, player inputs and additional GUI controls and components. Topics for a 2D game engine include tile maps, more particle effects, camera management, inventory management, game state, and artificial intelligence. Lecture (2.00), Laboratory (2.00). Prerequisite: GAM-111.

**GAM-221 Game Programming 3D (3.00 cr.)**

This course provides the student with game programming knowledge and skills required for making 3D games. A professional game development platform will be investigated along with object-oriented programming concepts that include arrays, classes, properties, delegates, interfaces, and event handling. Students will also learn techniques for using a platform-integrated game engine to create game levels using terrain, material, object, and other level editing tools. Lecture (2.00), Laboratory (2.00). Prerequisite: GAM-111.

**GAM-222 Game Development 3D (3.00 cr.)**

This course provides the student with game programming knowledge and skills required for making 3D games. A professional game development platform will be investigated along with object-oriented programming concepts that include arrays, classes, properties, delegates, interfaces, and event handling. Students will also learn techniques for using a platform-integrated game engine to create game levels using terrain, material, object, and other level editing tools. Lecture (2.00), Laboratory (2.00). Prerequisite: GAM-221.

**GEO - GEOGRAPHY****GEO-101 World Geography (3.00 cr.)**

This course is a detailed study of topography, land usage, and natural resources as they directly and indirectly affect human, economic, historical, and political interaction. >General Education Course. >Diversity Course. Lecture (3.00).

**GEO-102 Human Geography (3.00 cr.)**

This course is an introduction to the spatial patterning of human activities and the role of human affairs. This course explores some of the main issues in human/cultural geography including: economic development, industrialization, population distribution, organization of urban and non-urban societies, agriculture, nationalism, meaning of new spaces, and

cultural expressions in order to better understand the contemporary world. In addition, the class introduces various concepts and techniques used by geographers. >General Education Course. >Diversity Course. Lecture (3.00).

## HIS - HISTORY

### **HIS-101 History of Western Civilization to the Reformation (3.00 cr.)**

This course is a study of the Western world from ancient times to the Renaissance and Reformation. Major cultural, social, economic, political, and religious developments in the history of the West are surveyed. >General Education Course. Lecture (3.00).

### **HIS-102 History of Western Civilization since the Reformation (3.00 cr.)**

This course is a study of the Western world from the sixteenth century to the contemporary period. Major cultural, social, economic, political, and religious developments in modern Western history are surveyed. >General Education Course. Lecture (3.00).

### **HIS-105 Women in History (3.00 cr.)**

This course is a study of women's roles from the classical age to the present. Various past societies are examined to determine their attitudes towards women as well as the causes and consequences of these attitudes. Particular attention is placed on studying women's roles in 19th and 20th century Europe and America. >General Education Course. Lecture (3.00).

### **HIS-106 History of Modern Europe to the French Revolution (3.00 cr.)**

This course is an analysis of western European history from the late Middle Ages to 1815. The course provides an overview of the major political, economic, and cultural developments that molded early modern Europe and culminates with an intensive examination of the French Revolution and the Napoleonic era. >General Education Course. Lecture (3.00).

### **HIS-107 History of Modern Europe Since the French Revolution 3.00 cr.)**

This course is an analysis of western European history from 1815 to present. The course provides an overview of the major political, economic, and cultural developments that characterize modern Europe and concludes with a comparative study of postwar Europe and America. >General Education Course. Lecture (3.00).

### **HIS-111 United States History to Reconstruction (3.00 cr.)**

This course is a survey of the history of America from the colonial era to the Civil War and Reconstruction period. Emphasis is placed on the origins of American political system and on the social, cultural, economic, and diplomatic development of the United States. >General Education Course. Lecture (3.00).

### **HIS-112 United States History since Reconstruction (3.00 cr.)**

This course is a survey of the history of the United States from the Reconstruction period to the present. Emphasis is placed on the American political system and on the social, economic, and diplomatic development of the United States. >General Education Course. Lecture (3.00).

### **HIS-113 History of 20th Century United States to World War II (3.00 cr.)**

This course is a study of the United States from the beginning of the 20th Century through the New Deal Era of the 1930's. Topics covered include Industrialism, Progressivism, the Great Depression, the New Deal, and United States involvement in world affairs, World War I, and the political, social, economic, and cultural development of the United States during this period. >General Education Course. Lecture (3.00).

### **HIS-114 History of 20th Century United States since World War II (3.00 cr.)**

This course is a study of the United States from the Second World War to the present. Topics covered include World War II diplomacy, the Cold War, containment, the Vietnam era, d'ente, domestic reforms including Civil Rights, and the Great Society, Watergate, and other political, social, economic, and cultural developments in the United States from the 1940's to the present. >General Education Course. Lecture (3.00).

### **HIS-115 Recent American Foreign Policy (3.00 cr.)**

This course is an analysis of the way World War II altered the relationships between world and national powers and of how the turbulence of the period led to international tensions and conflict. The course examines the Cold

War, its underlying forces and trends, its principal events, and its participants. Lecture (3.00).

### **HIS-116 Women American History (3.00 cr.)**

This course is a survey of the history of women from the colonial period to the present. Feminism, women's suffrage, and the advocacy of social and economic equality are the unifying themes of the course. >General Education Course >Diversity Course Lecture (3.00).

### **HIS-117 Themes in U.S. History (New Jersey and Bergen County) (3.00 cr.)**

This course is a study of New Jersey from the earliest recorded times to the present. The course examines suburban development, ethnic and minority groups, transportation, political and economic history, and the social and cultural heritage of the county and state. Lecture (3.00).

### **HIS-121 Modern Asian History (3.00 cr.)**

This course is a study of modern China, India, and Japan. The course focuses on these societies' traditional cultures and worldviews and on the alterations and disruptions in these societies as a result of the introduction of Western values and ideas in the 19th and 20th centuries. >General Education Course. >Diversity Course. Lecture (3.00).

### **HIS-124 African American History (1877-Present) (3.00 cr.)**

The content of this course spans from the end of the Reconstruction Era to the present day. Its aim is to write into the historical discourse of all Americans the contributions of African Americans that shaped this country through their distinctive struggles and experiences. Lecture (3.00).

### **HIS-126 Modern African History (3.00 cr.)**

This course is a survey of African History from 1750 to the present. Emphasis is placed on the impact of slavery and western imperialism, the emergence of the new African states since the Second World War, and the social, cultural, political, and economic development of Africa. >General Education Course. >Diversity Course. Lecture (3.00).

### **HIS-130 Latin American to Independence (3.00 cr.)**

This course is a study of the European and Indian heritage of Latin American civilization. The course examines the development of colonial culture, with special emphasis on its government and economy, and concludes with an analysis of the wars of independence. >General Education Course. >Diversity Course. Lecture (3.00).

### **HIS-131 Latin American Since Independence (3.00 cr.)**

This course is a study of Latin America since 1850. The course analyzes the development of the region's principal countries: Argentina, Brazil, Chile, Colombia, Cuba, and Mexico. Regionalism, cultural development, the impact of American and world politics, dictatorships, land reforms, and constitutional issues relative to these countries are considered. >General Education Course. >Diversity Course. Lecture (3.00).

### **HIS-132 The Spanish Speaking Caribbean and Central America since 1898 (3.00 cr.)**

This course is a study of the Spanish Speaking Caribbean and Central America since 1898. The course analyzes the development of the region's principal countries, including Cuba, the Dominican Republic, Guatemala, El Salvador, Nicaragua, Costa Rica, and Panama. Cultural development, the impact of the United States and Cold War politics, dictatorships, land reforms and constitutional issues relative to these countries are considered. Lecture (3.00).

### **HIS-135 History of the Middle East (3.00 cr.)**

This course analyzes the rise of Islam with an emphasis on its cultural, intellectual, and scientific contributions to Middle Eastern civilization. Islam is examined as a religion, as a vast imperial political system, and as an advanced culture. Special attention is given to current Mideast conflicts and to the role of the United Nations in the region. International confrontation and collaboration in the region are examined. Lecture (3.00).

### **HIS-140 History of the Labor Movement (3.00 cr.)**

This course is an introductory study of the history of the American labor movement. The course examines the origins, growth, structure, and goals of craft and industrial union; the struggles that went into creating them; their impact on the contributions to society; their political roles; and their present-day efforts and concerns. Lecture (3.00).

**HIS-144 Contemporary American Issues and Problems (3.00 cr.)**

This course is a study in a historical context of selected political, social, economic, and diplomatic issues and problems facing the United States in the contemporary world. Lecture (3.00).

**HIS-145 Anatomy of Peace (3.00 cr.)**

This course is a study in a historical context of peace and war, particularly in the 20th century. Topics considered include diplomacy and peacemaking, arms control, world organizations, nonviolence, conflict, and conflict resolution. Relevant ethical, economic, biological, social, political, and psychological issues are examined. Lecture (3.00).

**HIS-195 Vietnam (3.00 cr.)**

This course is a 13-hour television course on the history of American and French involvement in Indochina. Interviews with major figures and ordinary individuals are interspersed with the film footage from a dozen countries (including France and Vietnam) as well as from US news and government archives. Lecture (3.00).

**HIS-461 Co-Op Work Experience (History) (1.00 cr.)**

This course offers students an opportunity for supervised work in the field of history. Job assistance is available through the Co-Op office. Lecture (1.00), Cooperative (3.00). Prerequisite: take 1 course from HIS.

**HIS-462 Co-Op Work Experience (History) (2.00 cr.)**

This course offers students an opportunity for supervised work in the field of history. Job assistance is available through the Co-Op office. Lecture (1.00), Cooperative (8.00). Prerequisite: take 1 course from HIS.

**HIS-463 Co-Op Work Experience (History) (3.00 cr.)**

This course offers students an opportunity for supervised work in the field of history. Job assistance is available through the Co-Op office. Lecture (1.00), Cooperative (12.00). Prerequisite: take 1 course from HIS.

**HRM – HOTEL/RESTAURANT/HOSPITALITY****HRM-101 Introduction Hospitality Management (3.00 cr.)**

This course is a study of the fundamental principles of hotel, restaurant, and food service operations. Basic managerial and operating functions prevalent in the industry are considered in conjunction with the various job opportunities available. Lecture (3.00).

**HRM-102 Food Protection and Safety (3.00 cr.)**

This course introduces the principles involved in identification and prevention of food contamination; the role of state, federal and local Public Health regulations; accident prevention; and the safety practices and control measures used in the various food service operations. Students will take the FDA Food Protection Certification exam as part of the course. Lecture (2.00), Laboratory (2.00).

**HRM-103 Professional Food Preparing Techniques (3.00 cr.)**

This course is the study of the techniques used in the preparation of such basic foods as vegetables, potatoes, eggs, fish, shellfish, and meats. Theories of grilling, frying, broiling, and sautéing, as well as demonstrations, lectures, and laboratory work on meat cuts and their utilization are included in the course. Lecture (1.00), Laboratory (4.00).

**HRM-104 Front Office Procedures (2.00 cr.)**

This course is a study of the principles of the organization and operation of public lodging facilities. Front office management and procedures covering duties of the manager, assistant manager, room clerk, night auditor, and cashier are discussed. Lecture (1.00), Laboratory (2.00).

**HRM-106 Menu Planning and Nutrition (1.00 cr.)**

This course is a study of the principles of menu planning for a variety of food service operations. The preparation of balanced menus to meet differing nutritional needs, the human digestive system, the importance of food and diet to health, and the values of nutrients and calories in maintaining good health are some of the subjects covered in the course. Lecture (1.00), Laboratory (1.00).

**HRM-108 Computer Applications for the Hospitality Industry (1.00 cr.)**

This course introduces students to computerized recording, forecasting and other analytical procedures used by management to control food and beverage costs. Laboratory (2.00).

**HRM-110 Introduction to Baking (3.00 cr.)**

This course is a study of the basic theory of baking and the skill of producing baked products. The content of the course includes types of flour, leavening agents, scaling, and icings. Hands-on baking in a laboratory setting includes the production of breads, cakes, pastries, and cookies. Lecture (2.00), Laboratory (2.00).

**HRM-129 Event Planning and Management I (3.00 cr.)**

This course will provide the information and tools needed to meet the needs and expectations of participants of meeting and event participants in an ever-changing profession and conceptual age, with content relevant to the required daily activities and decisions. Lecture (3.00).

**HRM-201 Food and Beverage Cost Control (1.00 cr.)**

This course is a detailed study of the cost control procedures found within the hospitality industry. The content of the course includes the factors affecting purchasing, storage, issuing, receiving, and preparation. Lecture (1.00), Laboratory (1.00). Prerequisite: HRM-101.

**HRM-202 Quantity Food Production and Service (Fall Only) (3.00 cr.)**

This course concentrates upon the student operation of a cafeteria-type food service facility under an instructor's supervision and includes the preparation and service of various menu items. Students experience all phases of an institutional food service operation through rotation laboratory assignments. Lecture (1.00), Laboratory (4.00). Prerequisite: HRM-103.

**HRM-203 Beverage Management (2.00 cr.)**

This course is a study of the history, sources, production, uses, control, and legislation pertaining to alcoholic beverages. Bartending skills and mixology in hands-on laboratory settings are studied. Lecture (1.00), Laboratory (2.00). Prerequisite: HRM-101.

**HRM-204 Food Purchasing (Fall Only) (2.00 cr.)**

This course is the study of the types and kinds of meat, poultry, fish, shellfish, fruits and vegetables. An analysis of specifications and techniques in purchasing fresh, frozen, and canned products from commercial purveyors is presented. Lecture (1.00), Laboratory (2.00). Prerequisite: HRM-101.

**HRM-205 Restaurant Service Management (3.00 cr.)**

This course introduces the principles and techniques of waiting tables and doing table setups, and the course includes an analysis of the service management responsibilities associated with the operation of restaurants. Lecture (2.00), Laboratory (2.00). Prerequisite: HRM-101.

**HRM-206 Commercial Restaurant Operation (Spring Only) (3.00 cr.)**

This course concentrates upon the preparation and service of complete menus by students under the direction of program instructors. Students participate fully in the management and operation of a full-service formal restaurant. Lecture (1.00), Laboratory (4.00). Prerequisite: HRM-202.

**HRM-207 Hotel Sales and Convention Planning (1.00 cr.)**

This course is a study of the principles and techniques of group sales in the lodging industry. Topics of discussion include feasibility studies, advertising procedures, market development, identification of selling objectives, maximizing room occupancy, long-term sales planning, and convention operations. Lecture (1.00), Laboratory (1.00). Prerequisite: HRM-101.

**HRM-212 International Cuisine (3.00 cr.)**

This course is a study of the recipes for the preparation of foods from various countries around the world. French, Italian, German, Chinese, Japanese, Mexican, and American cuisine are considered. Lecture (2.00), Laboratory (2.00). Prerequisite: HRM-103.

**HRM-213 Classical Garde-Manger (Fall Only) (3.00 cr.)**

This course is a study of a wide variety of food decorating and garnishing techniques. Laboratory work includes fruit and vegetable decoration and the preparation of aspic, chaud, froid, hors d'oeuvre, and gelatin. Lecture (2.00), Laboratory (2.00). Prerequisite: HRM-103.

**HRM-214 Banquet and Catering Management (2.00 cr.)**

This course introduces students to the skills necessary to be qualified, competent and creative food service specialists. Lecture (2.00). Prerequisite: HRM-101.

**HRM-216 Facilities Planning, Layout and Design (3.00 cr.)**

This course includes blueprint interpretation, principles of design and layout rendering to redesign an existing Hospitality facility. This course also focuses on the development of work analysis and flow charts for selection and placement of equipment in production, storage and, in some cases, kitchen and dining areas. Lecture (2.00), Laboratory (2.00). Prerequisite: HRM-101.

**HRM-217 Issues in the Hospitality Industry (2.00 cr.)**

This course includes the evaluation of selected food service units; a discussion of current concerns and issues common to all food services; and contemporary trends in the application of advanced technology, menu implementation strategies, marketing strategies, beverage management, and personnel management. Lecture (2.00). Prerequisite: HRM-101.

**HRM-219 Hospitality Law (3.00 cr.)**

This course provides industry specific legal fundamentals to students and practicing professionals in the hospitality industry. It introduces basic foundations and principles of the law affecting the hospitality industry and introduces guidelines and techniques that show managers how to manage preventively and apply a practical legal awareness to their actions. Lecture (3.00). Prerequisite: HRM-101.

**HRM-220 Advanced Baking Techniques (Spring Only) (3.00 cr.)**

This course continues the theory of baking and the skill of producing baked products. Laboratory work includes elaborate cake and pastry making, showpiece desserts, and delicate marzipan, sugar and chocolate presentations. Lecture (2.00), Laboratory (2.00). Prerequisite: HRM-110.

**HRM-229 Event Planning and Management II (3.00 cr.)**

This course will provide the information and tools needed to meet the needs and expectations of participants of meeting and event participants in an ever-changing profession and conceptual age, with content relevant to the required daily activities and decisions. Lecture (3.00). Prerequisite: HRM-129 or BUS-129.

**HRM-462 Co-Op Work Experience (Hotel/Restaurant/Hospitality) (2.00 cr.)**

This course requires part-time employment by the student in a college-approved business organization to help the student gain insight into marketing and administrative practices of the industry. This paid work experience is supervised and coordinated by a faculty member. Hospitality industry related jobs are required and must be approved by a faculty coordinator. Job assistance is available through the Co-Op office. Lecture (1.00), Cooperative (12.00). Prerequisite: HRM-101.

**HRT - HORTICULTURE****HRT-101 Fundamentals of Horticulture (3.00 cr.)**

This course is designed to acquaint the student with the multifaceted field of ornamental horticulture. Topics for examination include the historical role of horticulture from the artistic and scientific perspectives, as well as its commercial and aesthetic significance and applications for the future. Discussion of current employment opportunities, trends and practices will be emphasized. Noted guest lecturers from all fields of horticulture will share their views and experiences. Lecture (2.00), Laboratory (3.00).

**HRT-102 Plant Science (4.00 cr.)**

This course is designed to familiarize the student with the horticultural relationship of plants to botanical anatomy and function, including the limiting factors that influence plant growth such as light, temperature, water and nutrients. The characteristics of soils, soil nutrient deficiencies, fertilizers and soil amendments, as well as their relationship to plant growth will be covered. Lecture (3.00), Laboratory (3.00).

**HRT-103 Turf and Grounds Management (3.00 cr.)**

This course is the study of turf and plant practices on the residential and commercial sites. Emphasis is placed on the structure and growth habits of commonly used species and cultivars including installation, renovation and maintenance practices. Exposure to grounds maintenance equipment commonly utilized in the installation and maintenance of the landscape is included. Lecture (2.00), Laboratory (3.00).

**HRT-104 Landscape Plants and Materials 1 (2.00 cr.)**

This course is an introduction to the basic genera of the most commonly utilized trees, shrubs and ground covers in the landscape. In addition to

identification, growth form, color, texture and habitat requirements, and their uses in the residential and commercial sites will be studied. Lecture (1.00), Laboratory (2.00).

**HRT-112 Pests Ornamental Plant (4.00 cr.)**

This course introduces the student to the insects, diseases, and environmental disorders that affect plants. Identification of pests and methods of controlling them are emphasized. Lecture (3.00), Laboratory (3.00).

**HRT-113 Principles of Landscape (3.00 cr.)**

This course is a study of the design and development of landscape plans from plot plans and site analysis studies. Instruction in drafting and mechanical skills is included. Lecture (2.00), Laboratory (3.00). Prerequisite or Corequisite: HRT-104.

**HRT-114 Computer Applications for Landscape Design (3.00 cr.)**

This course will introduce students to the Computer Aided Design (CAD) and quotation software used by professionals in the green industry. The course's focus is on learning to use industry standard computer software such as Dynascape to develop landscape design projects. Students should be familiar with basic computer functions before enrolling. Lecture (2.00), Laboratory (2.00).

**HRT-115 Floral Design (3.00 cr.)**

This course is a study of the plants, supplies, and design skills used in flower arranging. Laboratory experiences include seasonal and non-seasonal arrangements for a variety of occasions. Lecture (2.00), Laboratory (3.00).

**HRT-119 Greenhouse Operations and Production (3.00 cr.)**

This course is a study of the management practices of field and greenhouse production of foliage and floral crops. Emphasis is placed on the commercial practices of purchasing, programming, cultural production, storage, handling, and sales of cut flowers and potted plant crops. The chain-of-life concept is discussed as it relates to the consumer's aesthetic use of cut flowers and plants. Lecture (2.00), Laboratory (3.00).

**HRT-120 Interior Plantscaping (3.00 cr.)**

This course acquaints the student with interior plant materials, with emphasis on their cultural requirements, maintenance practices and key ornamental aspects. Basic business applications regarding installation and maintenance contracts are covered. Emphasis will be placed on selection of appropriate plants in environments calling for a balance of human needs and plant culture. Lecture (2.00), Laboratory (2.00).

**HRT-124 Irrigation Technology (2.00 cr.)**

This is a course designed to expose students to landscape and turf equipment technology, system designs, installation and maintenance of a variety of irrigation types. Students will be involved with reading irrigation blueprints, troubleshooting potential problems and repair techniques. Lecture (1.00), Laboratory (2.00).

**HRT-125 Equipment Management (2.00 cr.)**

This course introduces the student to the selection, proper use, maintenance and repair of power tools that are used in the lawn and tree care industries. Lecture topics will focus on the necessary information needed to make purchasing decisions as well as safety and proper use practices. The lab section provides the student with a hands-on approach to troubleshooting engine problems and a variety of repair options. Students will be required to present projects relating to their industry's equipment needs. Lecture (1.00), Laboratory (2.00).

**HRT-130 Landscape Contracting (1.00 cr.)**

This course is a study of the basic requirements for developing landscape contracts and the writing of detailed specifications. Ethical practices and professional relationships among the client, consultant, contractor, other allied professions, and employees are also studied. Project costs and fee determination procedures are represented and simulated in the labs. Lecture (1.00), Laboratory (1.00).

**HRT-204 Landscape Graphics (2.00 cr.)**

This course emphasizes the techniques for formulating, presenting, and drafting landscape designs. In addition, the basic design elements of planting, including form, texture, color, sequence of bloom, and ecological

associations will be studied. Lecture (1.00), Laboratory (2.00).  
Prerequisite: HRT-113.

#### **HRT-213 Sustainable Design and Construction (3.00 cr.)**

This course is a continuation of the advancement of the student's design skills and practices. This course will place special emphasis on the ecological association of the land and plants. Students will develop landscape plans utilizing green technology while addressing the environment and topographical concerns of a site. Lecture (2.00), Laboratory (2.00). Prerequisite: HRT-113.

#### **HRT-214 Landscape Design/Build Capstone (4.00)**

This course will continue improving the student's design skills with a series of group projects using a variety of sites. Students will polish their presentation skills while solving problems and business management issues of increasing complexity. Off-campus visitations to design/build facilities and project sites will offer students additional insight into the day-to-day experience of working in the green industry. Lecture (2.00), Laboratory (2.00). Prerequisite: HRT-213.

#### **HRT-215 Landscape Design/Build Management (4.00)**

This course brings together the student's knowledge of both horticulture and business. Students will take a residential design and a project of their own choosing from start to finish, combining design with construction. Emphasis is on design and construction details, estimating, specifications, and contract documents. Lecture (2.00), Laboratory (2.00). Prerequisite: HRT-214.

#### **HRT-232 Plant Propagation (4.00 cr.)**

This course is designed to familiarize the student with the techniques, facilities and materials needed for plant propagation in the greenhouse. Techniques of both vegetative and sexual reproduction of herbaceous and woody plants, as well as greenhouse crops and crops for the interior landscape are covered. Lecture (3.00), Laboratory (3.00). Prerequisite: HRT-102.

#### **HRT-233 Landscape Plants and Materials II (4.00 cr.)**

This course places emphasis on the identification, culture and use of both native and cultivated herbaceous materials used in the landscape and further continues with the identification and use of more specialized and unique woody plant materials. Laboratory and field exercises include studies and demonstrations of their applications and uses in both natural and designed settings. Lecture (3.00), Laboratory (3.00). Prerequisite: HRT-104.

#### **HRT-234 Commercial Floral Design Management (4.00 cr.)**

This course introduces the student to the production methods encountered in a commercial floral operation. Flower selection, basic and specialized supplies and their uses in all phases of the commercial operation will be discussed and demonstrated. In addition to designs of special occasion arrangements, students will be exposed to various marketing aspects of the floral industry including purchasing, sales and profitability. Lecture (3.00), Laboratory (3.00). Prerequisite: HRT-115.

#### **HRT-235 Landscape Analysis (3.00 cr.)**

This course acquaints the student with the different sites encountered by the landscape contractor, emphasizing appropriate planning in the development of both residential and commercial properties. Construction considerations will include drainage, irrigation, structures and the selection of materials. The integration of site analysis and construction materials in student projects will be stressed. Lecture (2.00), Laboratory (3.00). Prerequisite: HRT-104.

#### **HRT-236 Horticulture Marketing and Sales (3.00 cr.)**

This course introduces the student to concepts relating to preparation for a career in horticulture. Field studies into horticultural businesses, group discussions and consultations with industry professionals assist in formulating effective strategies and planning for a profitable business. Included are discussions of basic principles of marketing, current industry trends and sales. Lecture (3.00). Prerequisite: HRT-101.

#### **HRT-237 Arboriculture/Plant health care (3.00 cr.)**

This course is the study of the care of trees and woody plants. Emphasis is placed on pruning, pest control and proper cultural practices including planting procedures and fertilization schedules. Other important topics to be covered are the safety practices involved with tree climbing, pesticide

application, and tree removal. The course will provide an understanding of the basic functions of woody plant systems. Lecture (2.00), Laboratory (3.00).

#### **HRT-462 Co-Op Work Experience (Horticulture) (2.00 cr.)**

This course is a supervised work experience program that includes paid employment at an approved horticultural establishment and attendance at a weekly seminar. The course is designed to provide students with opportunities to learn and to practice skills under professional guidance. The area of placement will depend upon the students' backgrounds and interests. Job assistance is available through the Co-Op office. Lecture (1.00), Cooperative (11.00). Prerequisites: take 1 course from HRT.

### HSE – HOMELAND SECURITY

#### **HSE-101 Introduction to Homeland Security (3.00 cr.)**

This course focuses on a comprehensive, up-to-date overview of homeland security, from an all-hazards perspective. Students examine threats to homeland security, including natural and technological disasters, as well as intentional threats of domestic and international terrorism, including weapons of mass destruction. Students review the roles and responsibilities of government agencies, non-government organizations, and individual citizens in homeland security. Lecture (3.00).

#### **HSE-102 Introduction to Emergency Management (3.00 cr.)**

This course offers an in depth analysis of planning and administration of Emergency Management. The course addresses natural and manmade disasters, FEMA and state agencies, OSHA, National Incident Management System (NIMS,) Incident Command procedure, National Response Plan and safety in the working environment. Lecture (3.00).

#### **HSE-103 Legal Aspects of Homeland Security and Emergency Management (3.00 cr.)**

This course is an introduction to the legal and policy framework for emergency management and response to natural and technological hazards and disasters. The course addresses the role of local, state, and federal governments in an emergency or disaster response. The duty to act, liability and negligence, the use of volunteer resources and the role of counsel in emergency management is examined. Lecture (3.00).

#### **HSE-104 Disaster Management, Risk Assessment and Mitigation (3.00 cr.)**

This course covers the basic principles of disaster management due to natural or manmade events, the identification, and assessment and monitoring of risks and the mitigation of risks using available technological, human, and organizational resources. Lecture (3.00).

### INF – INFORMATION TECHNOLOGY

#### **INF-100 Keyboarding I (3.00 cr.)**

This course provides Introductory instruction on the computer keyboard. Speed and accuracy is developed through use of the touch method. The course content introduces memos, e-mail, letters, reports, and manuscripts; the timed writing component requires at least 25 words a minute with three or less errors in order to pass the course. This course can be waived for students who demonstrate proficiency in a credit-by-examination test. Lecture (2.00), Laboratory (2.00).

#### **INF-101 Introduction to Information Technology (3.00 cr.)**

This course examines computing tools, processes, and applications and their appropriate use in society. Topics include hardware, software, the Internet and web, communications and networking, and the effective use of related tools. Labs will provide hands-on activities relating to the course content. Students will work in an online learning system. Lecture (2.00), Laboratory (2.00).

#### **INF-107 Mini Computer Operation (3.00 cr.)**

This course prepares the student to use the IBM AS/400 System. Topics include database concepts, display files control language commands, and source entry utility. Lecture (2.00), Laboratory (2.00).

#### **INF-108 PC Upgrade, Maintenance and Diagnosis (3.00 cr.)**

This course provides instruction in the infrastructure, configuration, upgrade, troubleshooting and repair of PC systems. Students will partially assemble and upgrade a PC. Topics include diagnosing problems;

preventive maintenance; safety and environmental issues; motherboards (components and architecture); computer memory; input/output (I/O) interfaces; printer classes; basic networking and data communications concepts and components. This course assists with preparation for the CompTIA A+ Certification. Lecture (2.00), Laboratory (2.00).

#### **INF-114 Microsoft Office (3.00 cr.)**

(Office 2010) This course uses project-based exercises to teach the fundamentals of the Microsoft Office Suite - specifically, Word (word processing), Excel (spreadsheet), Access (database), PowerPoint (presentation), and Outlook (e-mail and calendar). Labs will include exposure to web development using the suite. Lecture (2.00), Laboratory (2.00).

#### **INF-115 Desktop Publishing (1.00 cr.)**

This course is a hands-on experience integrating text and graphics to design, edit, and produce a variety of business documents. Knowledge of word processing is helpful. Laboratory (2.00).

#### **INF-119 Document Processing with Microsoft Word (3.00 cr.)**

(Word 2010) This course provides hands-on instruction using a popular word processing program. Topics covered include the creation, modification, and printing of documents that include text and graphics. Emphasis will be given to the proper formatting of documents and the production of office publications. Students are expected to keyboard at 30 WPM. Lecture (2.00), Laboratory (2.00).

#### **INF-120 PowerPoint (1.00 cr.)**

(PowerPoint 2010) This course is an introduction to electronic presentations. Students will learn to create professional looking, computer-generated presentations that include use of design templates, graphics, sounds, animations, OLE and web links. Students will work in outline and slide views. Laboratory (2.00).

#### **INF-124 Spreadsheet Excel (1.00 cr.)**

(Excel 2010) This course is a hands-on experience of a state-of-the-art electronic spreadsheet. The course will provide step-by-step instruction in the various commands necessary for spreadsheet creation and the manipulation and management of spreadsheets. All lab work is done on a Microsoft Windows processing platform. Laboratory (2.00).

#### **INF-130 Testing and Quality Assurance (3.00 cr.)**

This course introduces methodologies associated with quality assurance testing. Students will learn about the role of testing in the software development life cycle and will develop systematic approaches to facilitate thorough testing. Issues specific to multi-platform environments will be investigated. Students will document their testing procedure and results using both verbal and written communication methods. The relationship between testing, product marketing, and customer service will be explored. Projects may include testing for game programming. Lecture (2.00), Laboratory (2.00).

#### **INF-140 Introduction Multimedia (3.00 cr.)**

This course introduces the student to the various applications of computer-based multimedia in industry, government, education, and entertainment. Hardware systems, distribution media, flowcharts, software tools, scripts, and production will be covered. Students will work in groups to design and prepare a multimedia presentation. Lecture (2.00), Laboratory (2.00).

#### **INF-143 Web Publishing (1.00 cr.)**

This course introduces the student to the principles involved in creating dynamic web sites. Students learn to use a variety of tools to make compelling and informative web pages applying current web productivity software. Exercises are given that allow students to design, develop and upload their web pages onto the Internet without web-based programming. Web site management strategy is also discussed. Laboratory (2.00).

#### **INF-144 Windows Desktop Operation (1.00 cr.)**

(Vista) This course introduces the student to the basics of the Microsoft Windows desktop. Topics presented include working with files, organizing files with Windows Explorer, personalizing your Windows environment, bringing the Web to the desktop, searching for information, working with graphics, object linking and embedding, exploring your network, working with hardware, and managing Windows. Laboratory (2.00).

#### **INF-145 Visual Basic Programming (3.00 cr.)**

This course provides effective hands-on instruction in an event-driven, high level programming language, using a series of tools to design and control object-oriented graphical user interfaces in an integrated development environment. All lab work is done on a Microsoft Windows processing platform. Lecture (2.00), Laboratory (2.00).

#### **INF-146 Web Development (3.00 cr.)**

This course provides instruction in the development and composition of Web pages. Students will author pages that meet current professional standards as specified by the World Wide Web consortium. They will write HTML and CSS using a text editor and will be introduced to web authoring productivity software. Objects such as graphics and sound, style sheets, JavaScript, and issues surrounding cross-platform viewing will be discussed. The students will develop and publish a completed Web site. Recommended Corequisite: INF-101. (To be successful in this course, students should adhere to the recommendation.) Lecture (2.00), Laboratory (2.00).

#### **INF-147 Web Development Using Dreamweaver (3.00 cr.)**

This course introduces students to Web page authoring using a What-You-See-Is-What-You-Get editing environment. This course will focus on technical mastery of the software tools and techniques used to create Web pages with Dreamweaver, and on an understanding of the technical and environmental issues that affect Web page design, performance, and effectiveness. Graphic design issues will be addressed in this context. Lecture (2.00), Laboratory (2.00).

#### **INF-150 Business Programming Logic (3.00 cr.)**

This course develops and reinforces the student's logical thought processes using proper design techniques and tools, especially flowcharting. Topics presented include exploration of business programming considerations, such as input of data, output of information, accuracy and reliability, the use of objects and object-oriented programming, as well as data structures. Topics under data structures include linked-lists, hyperlinking, stacks, queues, trees, and traditional file structures. Lecture (2.00), Laboratory (2.00). Prerequisites: MAT-032, MAT-035.

#### **INF-151 Database: Access (1.00 cr.)**

(Access 2010) This course is a hands-on experience of a relational database management system. The course entails developing database management projects starting with the design of the structure of a database, entering and editing data, designing multi-table queries, and creating forms and reports. Various techniques of database applications development will be implemented. All work will be done on a Microsoft Windows processing platform. Laboratory (2.00).

#### **INF-152 C/C++ Programming (3.00 cr.)**

This course provides the foundations for programming in the C and C++ languages. Students code programs applying C/C++ operators, constructs, and functions. Topics covered include language version differences, definition of variables; Mathematics, relational, and logical operators; decisions; while and for loops; C/C++ functions, user written functions, and scope and passing values. Lecture (2.00), Laboratory (2.00).

#### **INF-153 Java Programming (3.00 cr.)**

This course provides effective hands-on instruction in this powerful and versatile object-oriented language. Students develop stand-alone applications as well as applets that run in Java-enabled environments. Topics explored include fundamental syntax and Java programming tools, working with objects, arrays, conditionals and loops, creating classes, threads, graphics, fonts, and color. Some advanced concepts such as animation, images, and sound may also be covered. Lecture (2.00), Laboratory (2.00).

#### **INF-160 Networking Technologies and Data Communications (3.00 cr.)**

This course offers comprehensive coverage of networking and data transmission key terms, concepts, and development strategies. Topics presented include the history of network development; network media; network protocols; network/data transmission theory (OSI layers and IEEE standards); network types; network design; server/client configuration; network administration; network remote access; wide area networks; and network troubleshooting. The course assists in preparing the student for the MCSE certification exams offered by Microsoft and the Foundations Level CIW certification. Lecture (3.00).

**INF-161 Internet Research and Data Handling (1.00 cr.)**

This course provides an in-depth view of the Internet and is designed to meet both professional and research needs. Topics covered include advanced searching strategies and techniques, data mining, information integrity and intellectual property, FTP sites, downloads, file types and their integration into applications, and connectivity issues. Laboratory (2.00).

**INF-162 Introduction to the Internet (1.00 cr.)**

This course introduces the necessary skills to access the Internet using leading Internet browsers. Topics covered include the Web, its components and organization; URLs; browsing Web pages; Web management techniques; saving and printing; fundamental techniques for searching using various search engines; sending and receiving electronic mail; mail management techniques; reading and posting newsgroup articles, conversing and chatting; and popular Web sites. Course credit by exam is available. Laboratory (2.00).

**INF-163 Internet Concepts and Applications (3.00 cr.)**

This course provides comprehensive coverage of the Internet. Topics presented include the Internet's history; its composition and technologies; protocols; electronic mail systems; browser and Web concepts; source integrity; searching the Web for research and gaining market intelligence; commanding FTP, newsgroups, gopher, and Telnet; and objects, plug-ins and viewers. This course assists in preparation for Foundations Level CIW certification. Lecture (2.00), Laboratory (2.00).

**INF-164 Networking Fundamentals I (4.00 cr.)**

This course exposes students to the skills needed to design, build, and maintain small to medium-sized networks. Students are provided with classroom and laboratory experience in current and emerging networking technology. Focus is on the theory behind LANs. Topics include safety, networking, network terminology and protocols, network standards, LANs, WANs, OSI models, cabling, cabling tools, routers, router programming, Ethernet, Internet Protocol addressing, network standards, safety and environment issues. This course assists in preparation towards the CISCO CCNA certification. 3 lectures, 2 labs, 4 credits Prerequisites: None; Helpful: A+ Certification; Microsoft Office Skills; Introductory programming or multimedia courses; Introductory electronics Lecture (3.00), Laboratory (2.00).

**INF-165 Introduction to Linux (1.00 cr.)**

This course provides a hands-on introduction to this open-source operating system. Students learn to configure a graphical desktop environment, install and configure office-suite applications, create a Linux server environment, configure basic services, and use Linux commands. Laboratory (2.00).

**INF-170 Networking Experience (3.00 cr.)**

This course awards transfer credit, based upon proven extensive professional experience in Network Administration or completion of sufficient networking coursework, to students wishing to enter the Network Security Certificate of Achievement. New students also may satisfy this requirement by enrolling in INF-160. Lecture (3.00).

**INF-208 Systems Analysis and Design (3.00 cr.)**

This course addresses the effective use of equipment and management techniques in meeting the information needs of the contemporary business world. The techniques of analysis, specifications, selection, and implementation lead to the design of an optimal information system. A variety of hands-on tools will be used to complement the covered concepts. Lecture (2.00), Laboratory (2.00). Prerequisites: BUS-101 and (INF-145 or INF-152 or INF-153).

**INF-214 Administrative Simulation (2.00 cr.)**

This course requires students to apply software products to perform general office functions. Students will prepare a variety of documents integrating multiple office software applications. Critical thinking and personal time management will be used to organize work and make effective decisions. Lecture (1.00), Laboratory (2.00). Prerequisites: INF-101, INF-114, and INF-119.

**INF-217 Database for Applications (Oracle) (3.00 cr.)**

This course focuses on database design and implementation. Topics of discussion include database planning and development, normalization theory, creation of the conceptual model, conversion to the physical model, data entry and processing using SQL commands, and data integrity.

Students will develop databases from specifications and demonstrate their utility by performing SQL data retrieval. Database Administration topics will be introduced. This course assists with preparation for the OCA exam. Lecture (2.00), Laboratory (2.00). Prerequisite: INF-101 or CIS-158 or CIS-165 or INF-145 or INF-152 or INF-153.

**INF-218 Database Programming (3.00 cr.)**

(Oracle-PL/SQL) This course covers the creation of database applications using a procedural language extension to SQL. Students learn some of the limitations of SQL and explore procedural logic constructs such as variables, constants, conditional statements, iterative controls, functions, and procedures. Students will use exception handlers to make their programs more robust. They will gain experience using, creating, and managing packages. The concepts will be explored using database software in a hands-on project-based environment. Lecture (2.00), Laboratory (2.00). Prerequisite: INF-217.

**INF-219 Database Administration (3.00 cr.)**

This course covers the installation, configuration, deployment and administration of database servers. Beyond basic installation and configuration issues, students will learn how to back up and recover data, administer users, transport data between databases, manage data, and configure networks for database access. These concepts and skills will be explored using database software in a hands-on project-based environment. Lecture (2.00), Laboratory (2.00). Prerequisite: INF-101.

**INF-224 Advanced C++ Programming (3.00 cr.)**

This course is a continuation of C/C++ Programming. Students code application programs in a complete object-oriented environment applying advanced concepts such as templates, inheritance, polymorphism, C style input/output streams, object-pointers, functions, the persistence of object, and attributes. Lecture (2.00), Laboratory (2.00). Prerequisite: INF-152.

**INF-228 Excel Problem Solving (1.00 cr.)**

(Excel 2010) This course focuses on the practical applications of Excel. Business applications will be analyzed and developed. Topics covered include creating and using macros, linking among worksheets and between files, importing and exporting, databases, graphics, advanced functions, and other advanced spreadsheet topics as needed to develop applications. Laboratory (2.00). Prerequisite: INF-114 or INF-124.

**INF-230 Advanced Multimedia (3.00 cr.)**

This project-based course investigates selected areas of digital multimedia in depth. Students will work singly and in groups on hands-on projects that include subsets of the following: text as a visual design element, 2D bitmap and vector graphics, 3D modeling and animation, audio production, and video production. Open-source and commercial software tools will be used. Emphasis will be on mastery of underlying technologies, processes, techniques, and standards to achieve efficiency and optimization. Some projects may also involve the use of scripting. Lecture (2.00), Laboratory (2.00). Prerequisite: INF-140. Corequisite: INF-150.

**INF-232 Windows Client (3.00 cr.)**

This course will introduce students to the current Microsoft Windows operating system through lectures, demonstrations, discussions, and hands-on lab exercises. Students learn about and use the various tools for administering and configuring Windows including the Microsoft Management Console, Task Scheduler, and the Control Panel. Students are instructed how to install and administer TCP/IP; install, share and administer print devices; and manage data storage. The course also assists in preparing to sit for the current Windows MCP exam. Lecture (2.00), Laboratory (2.00). Prerequisites: INF-101 and INF-160.

**INF-237 Introduction to Business Expert Systems (3.00 cr.)**

This course is an overview of the concepts and business applications of expert systems. Topics presented include expert systems' characteristics, components of expert systems, and methods of knowledge acquisition. Emphasis is placed on business applications and implementation issues. One or more microcomputer-based expert system shells are demonstrated and used by students to create an expert system prototype(s) in the labs. Lecture (2.00), Laboratory (2.00). Prerequisite: INF-208.

**INF-239 Applications Development (3.00 cr.)**

This course is a capstone course using the case study approach to the design and implementation of an automated business system. Students work in groups or individually to develop a physical design for a

contemporary application, from which the solution is coded and tested. The final project contains the full scope of systems and programming documentation. Lecture (2.00), Laboratory (2.00). Prerequisites: INF-217 and (INF-224 or INF-248 or INF-246).

#### **INF-240 Client-Side Scripting Using JavaScript (3.00 cr.)**

This course provides experience in building interactive and dynamic Web pages. Topics taught include variables, data types, objects, operators, control structures, functions, cookies, and browser issues. Examples will include interactive forms and visual effects such as animation. Lecture (2.00), Laboratory (2.00). Prerequisites: INF-101 and (INF-141 or INF-146).

#### **INF-246 Advanced Visual Basic Programming (3.00 cr.)**

This course continues effective hands-on instruction in the event-driven, high level programming language Visual Basic. Emphasis is on programming, using object-oriented graphical user interfaces in an integrated development environment. All work is done on a Microsoft Windows processing platform. Lecture (2.00), Laboratory (2.00). Prerequisite: INF-145.

#### **INF-248 ActiveX Control Development Using Visual Basic (1.00 cr.)**

This course provides the Visual Basic programmer with effective hands-on instruction in developing ActiveX controls and programming them for Web page applications and active documents. Topics presented in class include creating ActiveX clients, ActiveX code components and controls. Laboratory (2.00). Prerequisites: (INF-161 or INF-162 or INF-163) and INF-246.

#### **INF-249 Visual C++ for Windows with MFC (3.00 cr.)**

This course provides the C++ programmer with effective hands-on instruction in developing Visual C++ applications using Microsoft Foundation Class Library (MFC). This course introduces Windows programming concepts using Windows resource identifiers, dialog boxes, and controls. In addition, the course covers the use of Visual C++ for developing stand-alone interactive applications. Lecture (2.00), Laboratory (2.00). Prerequisite: INF-224.

#### **INF-251 Advanced Access (1.00 cr.)**

(Access 2010) This course will focus on using the more powerful features of Microsoft Access including the organization of multiple databases, advanced methods of query, programming, and data manipulation. All work will be done on a Microsoft Windows processing platform. Laboratory (2.00). Prerequisites: INF-114 or INF-151.

#### **INF-252 Windows Server (3.00 cr.)**

This course introduces students to Microsoft Windows Server through lectures, demonstrations, discussions and hands-on labs. Students learn to install the current version of Windows Server, Active Directory, DHCP, DNS and also learn about the various file systems supported by Windows Server. Students use Microsoft Management Console, learn how to administer print services and install and administer network protocols and services. The course also assists in preparing to sit for the Windows Server MCP exam. (Completion of INF-232 is recommended before taking INF-252.) Lecture (2.00), Laboratory (2.00). Prerequisites: INF-101 and INF-160.

#### **INF-253 Technical Communications (3.00 cr.)**

This course employs computer-assisted methods for planning and presenting technical information in a clear and concise manner. Emphasis is placed on designing effective methods for determining the structure of oral, written, and graphic communications in a technical environment. Topics presented include preparation of end-user documentation, presenting technical information to non-technical individuals, reporting, extracting, charting, and summarizing data. Lecture (2.00), Laboratory (2.00). Prerequisite: INF-101.

#### **INF-254 Unix/Linux Network Administration (3.00 cr.)**

This course provides comprehensive coverage of the UNIX/Linux operating system. Topics covered include all key aspects of the operating system including installation procedures, command line usage, shell scripting and customization, commonly used tools and utilities, process control, Regular Expression (RE) pattern matching, and the X Windows system. The objective is to enable network administrators to utilize effectively the operating system and the tools it provides to automate their day-to-day activities. Lecture (2.00), Laboratory (2.00). Prerequisite: INF-160.

#### **INF-256 Topics in Networking (3.00 cr.)**

This course focuses on the latest advances in networking theory and administration. Students study topics that are of current relevance within this dynamic and fast-growing field. As the topics will change each semester, emphasis will be on identifying changes in networking standards and protocols; media, architecture and hardware; network security; shifts in vendor product and market share; and future technologies. Students are expected to use the Internet as a key fact-finding resource. Lecture (3.00). Prerequisites: INF-160 and (INF-161 or INF-162 or INF-163).

#### **INF-257 Network Troubleshooting (3.00 cr.)**

This course establishes the methodologies and tools necessary to troubleshoot proactively computer networks. Topics covered include methods for identification and repair strategies for network faults caused by user, hardware, and software problems; disaster recovery and backup plans; network management record keeping; configuration management; and patch/service release installation procedures. Lecture (2.00), Laboratory (2.00). Prerequisites: INF-232 and INF-252.

#### **INF-258 TCP/IP (3.00 cr.)**

This course examines Transmission Control Protocol/Internet Protocol (TCP/IP) concepts with emphasis on planning, deploying and managing a TCP/IP network. Topics include the configuration and logistics of TCP/IP networks; IP addressing and subnetting; Multicast IP; Mobile IP; IPv6; FTP and Remote Access Protocol (PPP and SLIP). Students will learn how to troubleshoot and manage TCP/IP networks using a packet sniffer, TCP/IP utilities, and protocols such as Internet Control Message Protocol (ICMP). Lecture (2.00), Laboratory (2.00). Prerequisite: INF-160.

#### **INF-260 Technical Support Operations (3.00 cr.)**

This course introduces students to both the methodological and hands-on customer service-related world of end user support. Course topics examined include understanding the support profession and models; customer service; mission statements and service level agreements; implementing a help desk; troubleshooting; procurement; outsourcing; evaluation measurements; help desk certification. Lab topics studied include application installation; software and virus troubleshooting; call tracking; remote support; and support documentation. Students complete an individual support project with documentation. Lecture (2.00), Laboratory (2.00). Prerequisites: INF-108, INF-144, and (INF-161 or INF-162 or INF-163).

#### **INF-263 Advanced Web Development (3.00 cr.)**

This course investigates a broad spectrum of web tools and technologies that are required to build and maintain client and server sites on the Web. Both client-side and server-side technologies will be discussed including the deployment of web sites. Lecture (2.00), Laboratory (2.00). Prerequisite: INF-146 and (INF-145 or INF-152).

#### **INF-264 Networking Fundamentals II (4.00 cr.)**

This course continues to build skills needed to design, build, and maintain small to medium-sized networks. The combination of laboratory and lectures focus on a more detailed understanding of the Open System Interconnection (OSI) models, Wide Area Networks (WANs), routers and using the routers and associated router components. Students learn how to start and set up routers while developing configurations consistent with the various operating systems and topologies. This course assists in preparation towards the CISCO CCNA certification. Lecture (3.00), Laboratory (2.00). Prerequisite: INF-164.

#### **INF-265 Network Configuration I (4.00 cr.)**

This course applies the concept and techniques acquired during prior coursework to perform LAN switching and LAN segmentation using routers, switches and bridges. Topics taught include Ethernet, Fast Ethernet, the benefits of segmentation, and LAN performance. Students work with the IPX protocol and configure interfaces as well as monitor the operation of the router. Benefits of the Spanning Tree Protocol and virtual LANs will be explored. This course assists in preparation towards the CISCO CCNA certification. Lecture (3.00), Laboratory (2.00). Prerequisite: INF-264.

#### **INF-266 Network Configuration II (4.00 cr.)**

This course seeks to differentiate among the following WAN services: LAPB, Frame Relay, ISDN/LAPD, HDLC, PPP and DDR. Key Frame Relay terms and features will be acquired to configure Frame Relays, LMLs, maps and subinterfaces. Skills for identification of PPP operations to encapsulate WAN data on CISCO routers will be acquired. ISDN concepts and

techniques will be introduced to enable identification of ISDN protocols, function groups, reference points, and channels. This course assists in preparation towards the CISCO CCNA certification. Lecture (3.00), Laboratory (2.00). Prerequisite: INF-265.

#### **INF-267 Network Security (3.00 cr.)**

This course provides a foundation-level course that focuses on securing an enterprise's systems and networks. Topics presented include email security; web security; system hardening; incident response; public key infrastructure; disaster recovery; basics of cryptography; and methods for combating spam, securing a server, and preventing denial of service attacks. Lecture (3.00). Prerequisite: INF-160 or INF-170.

#### **INF-268 Advanced Java Programming (3.00 cr.)**

Students code application programs in a complete object-oriented environment applying advanced concepts such as advanced GUI and graphics programming (Swing and 2D Graphics,) collections, exception handling, multi-threading, multimedia, file input/output, database connectivity (JDBC,) internationalization, and networking. Lecture (2.00), Laboratory (2.00). Prerequisite: INF-153.

#### **INF-270 Computer Crime (3.00 cr.)**

This course explores the use of networks as a tool of criminals. Our networked world has become a place of criminal activity that threatens our national security. This course discusses how a "networked" world has bred new crimes and new responses to those crimes and addresses the ways in which emerging technologies challenge existing laws and criminal procedures. Detecting and remediating national network security breaches will be explored. Lecture (2.00), Laboratory (2.00). Prerequisite: INF-160 or INF-170. Corequisite: INF-267.

#### **INF-271 Ethical Hacking (3.00 cr.)**

This course investigates the techniques used by malicious black-hat hackers to attack and penetrate a network. Students will learn to use these same hacking techniques to perform a white-hat ethical hack on the organization. Quantitative assessment and measurement of threats to information assets to determine where the organization is most vulnerable to hacking will be covered. Lecture (2.00), Laboratory (2.00). Prerequisite: INF-160 or INF-170. Corequisite: INF-267.

#### **INF-272 Windows Active Directory (3.00 cr.)**

This course introduces students to the basics of managing enterprise level networks using Active Directory. Students learn to create users and groups, manage file permissions, configure server roles, use group policies to configure and secure the network, configure DNS and use certificates to secure the network. Lecture (2.00), Laboratory (2.00). Prerequisite: INF-160 or INF-170.

#### **INF-273 Intrusion Detection and Prevention (3.00 cr.)**

This course introduces the tools, methods and resources to help identify, assess and report unauthorized or unapproved network activity. Students will learn to analyze packets to find special patterns in network traffic, to monitor network traffic and to take action based on prescribed rules when an intrusion occurs. Students will configure Intrusion Prevention Systems/Intrusion Detection Systems, analyze results, and prevent network intrusions. Lecture (2.00), Laboratory (2.00). Prerequisite: INF-160 or INF-170. Corequisite: INF-267.

#### **INF-461 Co-Op Work Experience (Information Technology) (1.00 cr.)**

This course is a recommended elective designed to provide the INF student with part-time paid work experience in an office of his/her specialty. The student has the opportunity to learn and practice data processing skills under professional guidance in a college-approved work environment. Evaluation visitations are performed by a trained faculty member. All student appointments must be approved by the Co-Op Coordinator. Job placement assistance is available through the Co-Op office. 60 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (3.00). Prerequisite: INF-101.

#### **INF-462 Co-Op Work Experience (Information Technology) (2.00 cr.)**

This course is recommended electives designed to provide the INF student with part-time paid work experience in an office of his/her specialty. The student has the opportunity to learn and practice data processing skills under professional guidance in a college-approved work environment. Evaluation visitations are performed by a trained faculty member. All student appointments must be approved by the Co-Op Coordinator. Job

placement assistance is available through the Co-Op office. 120 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (8.00). Prerequisite: INF-101.

#### **INF-463 Co-Op Work Experience (Information Technology) (3.00 cr.)**

This course is recommended electives designed to provide the INF student with part-time paid work experience in an office of his/her specialty. The student has the opportunity to learn and practice data processing skills under professional guidance in a college-approved work environment. Evaluation visitations are performed by a trained faculty member. All student appointments must be approved by the Co-Op Coordinator. Job placement assistance is available through the Co-Op office. 180 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (12.00). Prerequisite: INF-101.

#### **INF-464 Co-Op Work Experience (Information Technology) (4.00 cr.)**

This course is recommended electives designed to provide the INF student with part-time paid work experience in an office of his/her specialty. The student has the opportunity to learn and practice data processing skills under professional guidance in a college-approved work environment. Evaluation visitations are performed by a trained faculty member. All student appointments must be approved by the Co-Op Coordinator. Job placement assistance is available through the Co-Op office. 240 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (16.00). Prerequisite: INF-101.

### IST – INTERDISCIPLINARY STUDIES

#### **IST-101 Introduction to Technological and Information Literacy (TIL) (A) (1.00 cr.)**

This course introduces students to the history and use of contemporary computer technology and to the retrieval, evaluation, and management of electronic and print information. The course covers various types of computer systems, college library systems, the Internet and its applications, networked information systems, traditional scholarly resources, central concepts underlying the research process, the social impact of developments in information technology (IT), and ethical, legal, and political aspects of technology and information utilization. Laboratory (2.00).

#### **IST-102 Introduction to Technological and Information Literacy (TIL) (B) (1.00 cr.)**

This course introduces students to the history and use of contemporary computer technology and to the retrieval, evaluation, and management of electronic and print information. The course covers various types of computer systems, college library systems, the Internet and its applications, networked information systems, traditional scholarly resources, central concepts underlying the research process, the social impact of developments in IT, and ethical, legal, and political aspects of technology and information utilization. (Must be taken with a TIL-intensive section of a General Education course such as COM-100 or WRT-101) Lecture (1.00).

#### **IST-121 Introduction to the College Experience (2.00 cr.)**

This course combines academic subject matter and substantial writing assignments in a discipline context established by the individual instructor. This course provides a learning opportunity for the student that includes communication skills, critical reasoning, problem solving, study skills, time management, and goal setting. The objective of this course is to help students understand the value and benefits of higher education as a life experience. Lecture (3.00).

#### **IST-201 Pattern of Leadership (3.00 cr.)**

This course explores the aspects of effective leadership. Students employ critical reasoning skills, problem solving, and communications in order to identify and develop their own leadership philosophy. Topics of study presented include the concepts of leadership, historical perspectives, personal skill development, leadership in organizations, and contemporary leadership. Lecture (3.00). Prerequisites: COM-100 and WRT-101.

#### **IST-471 Co-Op Work Experience (Interdisciplinary Studies) (2.00 cr.)**

This course provides the student with practical, supervised work experience in a professional environment. Through on-the-job experience, students can acquire knowledge and skills to pursue a career in their area of interest. A faculty member supervises students, and job placement assistance is available through the Co-Op Office. Lecture (1.00), Cooperative (3.00).

**IST-472 Co-Op Work Experience (Interdisciplinary Studies) (2.00 cr.)**

This course provides the student with practical, supervised work experience in a professional environment. Through on-the-job experience, students can acquire knowledge and skills to pursue a career in their area of interest. A faculty member supervises students, and job placement assistance is available through the Co-Op Office. Lecture (1.00), Cooperative (8.00).

**IST-473 Co-Op Work Experience (Interdisciplinary Studies) (3.00 cr.)**

This course provides the student with practical, supervised work experience in a professional environment. Through on-the-job experience, students can acquire knowledge and skills to pursue a career in their area of interest. A faculty member supervises students, and job placement assistance is available through the Co-Op Office. Lecture (1.00), Cooperative (12.00).

**IST-474 Co-Op Work Experience (Interdisciplinary Studies) (4.00 cr.)**

This course provides the student with practical, supervised work experience in a professional environment. Through on-the-job experience, students can acquire knowledge and skills to pursue a career in their area of interest. A faculty member supervises students, and job placement assistance is available through the Co-Op Office. Lecture (1.00), Cooperative (16.00).

## LAN – WORLD LANGUAGES & CULTURES

**LAN-110 French I (3.00 cr.)**

This course is an introduction to the pronunciation, basic comprehension, and communication of French through active class use of simple vocabulary, grammar, and syntax. This course is recommended for students who have had two or less (including no) years of previous high school study of this language. Students with more than two years prior study should consult with the Academic Department Chair of the World Languages and Cultures Department for course placement guidance. >General Education Course. Lecture (3.00), Laboratory (1.00).

**LAN-111 German I (3.00 cr.)**

This course is an introduction to the pronunciation, basic comprehension, and communication of German through active class use of simple vocabulary, grammar, and syntax. This course is recommended for students who have had two or less (including no) years of previous high school study of this language. Students with more than two years prior study should consult with the Academic Department Chair of the World Languages and Cultures Department for course placement guidance. >General Education Course. Lecture (3.00), Laboratory (1.00).

**LAN-112 Italian I (3.00 cr.)**

This course is an introduction to the pronunciation, basic comprehension, and communication of Italian through active class use of simple vocabulary, grammar, and syntax. This course is recommended for students who have had two or less (including no) years of previous high school study of this language. Students with more than two years prior study should consult with the Academic Department Chair of the World Languages and Cultures Department for course placement guidance. >General Education Course. Lecture (3.00), Laboratory (1.00).

**LAN-113 Spanish I (3.00 cr.)**

This course is an introduction to the pronunciation, basic comprehension, and communication of Spanish through active class use of simple vocabulary, grammar, and syntax. This course is recommended for students who have had two or less (including no) years of previous high school study of this language. Students with more than two years prior study should consult with the Academic Department Chair of the World Languages and Cultures Department for course placement guidance. >General Education Course. Lecture (3.00), Laboratory (1.00).

**LAN-114 Russian I (3.00 cr.)**

This course is an introduction to the pronunciation, basic comprehension, and communication of Russian through active class use of simple vocabulary, grammar, and syntax. This course is recommended for students who have had two or less (including no) years of previous high school study of this language. Students with more than two years prior study should consult with the Academic Department Chair of the World Languages and Cultures Department for course placement guidance. >General Education Course. Lecture (3.00), Laboratory (1.00).

**LAN-115 Arabic I (3.00 cr.)**

This course is an introduction to the pronunciation, basic comprehension and communication of Arabic through active class use of simple vocabulary,

grammar, and syntax. The class will hold group discussions that focus on Arab Culture and Traditions in various geographical areas in the Arab world. This course is recommended for students who have had one or no years of previous high school study of this language. Students with two or more years prior study, please refer to the World Languages and Cultures Placement Policy on syllabus. >General Education Course. Lecture (3.00), Laboratory (1.00).

**LAN-116 Chinese (Mandarin) I (3.00 cr.)**

This course is an introduction to the pronunciation, basic comprehension, and communication of Chinese through active class use of simple vocabulary, grammar, and syntax. It is recommended for students who have had two or less (including no) years of previous high school study of this language. Students with more than two years prior should consult with the Academic Department Chair of the World Languages and Cultures Department for course placement guidance. >General Education Course. Lecture (3.00), Laboratory (1.00).

**LAN-119 Latin I (3.00 cr.)**

This course is an introduction to the pronunciation, basic comprehension, and communication of Latin through active class use of vocabulary, grammar, syntax, and to the culture of the ancient Romans. This course is recommended for students who have had one or less (including no) years of previous high school study of this language. Students with more than two or more years prior study should consult the World Languages and Cultures Placement Policy on this syllabus. >General Education Course. Lecture (3.00), Laboratory (1.00).

**LAN-120 Japanese I (3.00 cr.)**

This course is an introduction to the pronunciation, basic comprehension, and communication of Japanese through active class use of simple vocabulary, grammar, and syntax. This course is recommended for students who have had two or less (including no) years of previous high school study of this language. Students with more than two years prior study should consult with the Academic Department Chair of the World Languages and Cultures Department for course placement guidance. >General Education Course. Lecture (3.00), Laboratory (1.00).

**LAN-144 Irish I (3.00 cr.)**

This course is an introduction to the pronunciation, basic comprehension, and communication of Irish through active class use of simple vocabulary, grammar, and syntax. This course is recommended for students who have had two or less (including no) years of previous high school study of this Gaelic language. Students with more than two years prior study should consult with the Academic Department Chair of the World Languages and Cultures Department for course placement guidance. >General Education Course. Lecture (3.00), Laboratory (1.00).

**LAN-150 Spanish for Health Professions (3.00 cr.)**

This course is designed to enable individuals in the health career programs/professions to communicate with Spanish speaking clients in a variety of settings. Participants will learn interview and assessment skills, as well as other health related terminology. Through the acquisition of these skills, an understanding of Spanish speaking cultures will be attained. Lecture (3.00).

**LAN-152 Spanish for Commerce and Business (3.00 cr.)**

This is a course in basic Spanish for students in business and commercial studies programs. The course emphasizes practical vocabulary, technical terminology, and oral and written communication in the world of commerce and industry. Lecture (3.00).

**LAN-165 Korean I (3.00 cr.)**

This course is an introduction to the pronunciation, basic comprehension, and communication of Korean through active class use of simple vocabulary, grammar, and syntax. This course is recommended for students who have had two or less (including no) years of previous high school study of this language. Students with more than 2 years prior study should consult with the Academic Department Chair of the World Languages and Cultures Department for course placement guidance. >General Education Course. Lecture (3.00), Laboratory (1.00).

**LAN-170 American Sign Language I (3.00 cr.)**

This course is an introduction to the expressive and receptive skills required for communication in American Sign Language (ASL). Through active class

use of basic vocabulary, grammar, and syntax, students will begin exploration of Deaf Culture and begin to learn the language of that culture. This course is recommended for students who have had less than one year of previous study of this language. Students with more than two years of prior study should consult with the Academic Department Chair of the World Languages and Cultures Department for course placement guidance. >General Education Course. Lecture (3.00), Laboratory (1.00).

**LAN-180 Hebrew I (3.00 cr.)**

This course is an introduction to the pronunciation, basic comprehension, and communication of Hebrew through active class use of simple vocabulary, grammar, and syntax. It is recommended for students who have had less than one year of previous study of this language. Students with more than two years of prior study should consult with the Academic Department Chair of the World Languages and Cultures Department for course placement guidance. >General Education Course. Lecture (3.00), Laboratory (1.00).

**LAN-200 French II (3.00 cr.)**

This course offers students an opportunity to enhance their skills in the speaking, reading, writing, and comprehension of French through active class use of vocabulary, grammar, and syntax. >General Education Course. Lecture (3.00), Laboratory (1.00). Prerequisite: LAN-110; minimum grade C.

**LAN-201 Intermediate French I (3.00 cr.)**

This course expands students' French vocabulary and enhances their conversational ability. The course is conducted entirely in French and features extensive discussion of contemporary France and some grammar review. >General Education Course. Lecture (3.00). Prerequisite: LAN-200; minimum grade C.

**LAN-202 Intermediate French II (3.00 cr.)**

This course is conducted entirely in French and develops students' French communication skills through a study of the cultural history of France. >General Education Course. Lecture (3.00). Prerequisite: LAN-201; minimum grade C.

**LAN-203 French Conversation (3.00 cr.)**

This course emphasizes the spoken language, stressing fluency and correctness of structure, pronunciation, and vocabulary. Topics of discussion may include current cultural, social, and literary events. Students receive individualized instruction in syntax and vocabulary. This course is conducted in the target language. >General Education Course. Lecture (3.00). Prerequisite: LAN-200; minimum grade C.

**LAN-207 French Culture and Civilization (3.00 cr.)**

This course surveys the unique geography, pertinent history, significant literary and artistic movements, and the current sociopolitical role of France in the world. The course discusses contributions to world agriculture, industry, and international trade. The course is taught in French using a variety of media and may provide out-of-class learning opportunities. Lecture (3.00). Prerequisite: LAN-200.

**LAN-210 German II (3.00 cr.)**

This course offers students an opportunity to enhance their skills in the speaking, reading, writing, and comprehension of German through active class use of vocabulary, grammar, and syntax. >General Education Course. Lecture (3.00), Laboratory (1.00). Prerequisite: LAN-111; minimum grade C.

**LAN-211 Intermediate German I (3.00 cr.)**

This course expands students' German vocabulary and enhances their conversational ability. The course is conducted entirely in German and features extensive discussion of contemporary Germany and some grammar review. >General Education Course. Lecture (3.00). Prerequisite: LAN-210; minimum grade C.

**LAN-212 Intermediate German II (3.00 cr.)**

This course is conducted entirely in German and develops students' German communication skills through a study of the cultural history of Germany. >General Education Course. Lecture (3.00). Prerequisite: LAN-211; minimum grade C.

**LAN-213 German Conversation (3.00 cr.)**

This course emphasizes the spoken language, stressing fluency and correctness of structure, pronunciation, and vocabulary. Topics of discussion may include current cultural, social, and literary events. Students receive individualized instruction in syntax and vocabulary. This course is conducted in the target language. >General Education Course. Lecture (3.00). Prerequisite: LAN-210; minimum grade C.

**LAN-217 German Culture and Civilization (3.00 cr.)**

This course surveys the unique geography, pertinent history, significant literary and artistic movements, and the current sociopolitical role of Germany in the world. The course discusses Germany's contributions to world agriculture, industry and international trade. The course is taught in German using a variety of media and may provide out-of-class learning opportunities. Lecture (3.00). Prerequisite: LAN-210.

**LAN-220 Italian II (3.00 cr.)**

This course offers students an opportunity to enhance skills in the speaking, reading, writing, and comprehension of Italian through active class use of vocabulary, grammar, and syntax. >General Education Course. Lecture (3.00), Laboratory (1.00). Prerequisite: LAN-112; minimum grade C.

**LAN-221 Intermediate Italian I (3.00 cr.)**

This course expands students' Italian vocabulary and enhances their conversational ability. The course is conducted entirely in Italian and features extensive discussion of contemporary Italy and some grammar review. >General Education Course. Lecture (3.00). Prerequisite: LAN-220; minimum grade C.

**LAN-222 Intermediate Italian II (3.00 cr.)**

This course is conducted entirely in Italian and develops students' Italian communication skills through a study of the cultural history of Italy. >General Education Course. Lecture (3.00). Prerequisite: LAN-221; minimum grade C.

**LAN-223 Italian Conversation (3.00 cr.)**

This course emphasizes the spoken language, stressing fluency and correctness of structure, pronunciation, and vocabulary. Topics of discussion may include current cultural, social, and literary events. Students receive individualized instruction in syntax and vocabulary. This course is conducted in the target language. >General Education Course. Lecture (3.00). Prerequisite: LAN-220; minimum grade C.

**LAN-224 Advanced Italian Composition (3.00 cr.)**

This course develops the students' ability to write in Italian and emphasizes the relationship between the spoken and written idiom. Letters, reports, creative writing, and expository forms serve as the basis for an in-depth study of advanced Italian grammar. Lecture (3.00). Prerequisite: LAN-221.

**LAN-227 Survey Italian Literature (3.00 cr.)**

This course is a study of the development of Italian literature from the Middle Ages through the 20th Century. Lecture (3.00). Prerequisite: LAN-221.

**LAN-228 Elementary Spanish for Heritage Speakers (3.00 cr.)**

This course is designed to address the needs of Hispanic/Latino students who can communicate in Spanish but need to develop and/or improve their reading and writing skills. It addresses specific linguistic issues such as diction, orthography, and sentence structure. The course is conducted entirely in Spanish and includes cultural discussion. Recommended for students with some previous Spanish language instruction. >General Education Course. Lecture (4.00). Prerequisite: Academic Department Chair's consent required.

**LAN-229 Intermediate Spanish for Heritage Speakers (3.00 cr.)**

This course is a continuation of Elementary Spanish for Heritage Speakers. It continues to develop reading and writing skills, and to address linguistic issues. The course is conducted in Spanish and includes cultural discussions. >General Education Course. Lecture (3.00). Prerequisite: LAN-228; minimum grade C.

**LAN-230 Spanish II (3.00 cr.)**

This course offers students an opportunity to enhance their skills in the speaking, reading, writing, and comprehension of Spanish through active class use of vocabulary, grammar, and syntax. >General Education

Course. Lecture (3.00), Laboratory (1.00). Prerequisite: LAN-113; minimum grade C.

**LAN-231 Intermediate Spanish I (3.00 cr.)**

This course expands students' Spanish vocabulary and enhances their conversational and reading ability. The course is conducted entirely in Spanish and focuses upon more complex grammatical structures as well as upon discussions about the Hispanic culture. >General Education Course. Lecture (3.00). Prerequisite: LAN-230; minimum grade C.

**LAN-232 Intermediate Spanish II (3.00 cr.)**

This course is conducted entirely in Spanish and develops students Spanish communication skills through a study of the cultural history of Spain and Latin America. >General Education Course. Lecture (3.00). Prerequisite: LAN-231; minimum grade C.

**LAN-233 Spanish Conversation (3.00 cr.)**

This course emphasizes the spoken language, stressing fluency and correctness of structure, pronunciation, and vocabulary. Topics of discussion may include current cultural, social, and literary events. Students receive individualized instruction in syntax and vocabulary. This course is conducted in the target language. >General Education Course. Lecture (3.00). Prerequisite: LAN-230; minimum grade C.

**LAN-234 Advanced Spanish Composition (3.00 cr.)**

This course develops the students' ability to write in Spanish and emphasizes the relationship between the spoken and written idiom. Letters, reports, creative writing, and expository forms serve as the basis for an in-depth study of advanced Spanish grammar. Lecture (3.00). Prerequisite: LAN-231.

**LAN-235 Survey Spanish Peninsular Literature (3.00 cr.)**

This course is a study of Spanish literature from the 12th century to the present. Lecture (3.00). Prerequisite: LAN-231.

**LAN-236 Survey Spanish American Literature (3.00 cr.)**

This course is a study of Spanish American literature from 1492 to the present. Lecture (3.00). Prerequisite: LAN-231.

**LAN-237 Mexican Culture and Civilization (3.00 cr.)**

This course surveys the unique geography, pertinent history, significant literary and artistic movements, and the current sociopolitical role of Mexico in the world. The course discusses Mexico's contributions to world agriculture, industry and international trade. The course is taught in Spanish using a variety of media and may provide out-of-class learning opportunities. Lecture (3.00). Prerequisite: LAN-231.

**LAN-238 Spanish Culture and Civilization (3.00 cr.)**

This course surveys the unique geography, pertinent history, significant literary and artistic movements, and the current sociopolitical role of Spain in the world. The course discusses Spain's contributions to world agriculture, industry, and international trade. The course is taught in Spanish using a variety of media and may provide out-of-class learning opportunities. Lecture (3.00). Prerequisite: LAN-231.

**LAN-239 Italian Culture and Civilization (3.00 cr.)**

This course surveys the unique geography, pertinent history, significant literary and artistic movements, and the current sociopolitical role of Italy in the world. The course discusses Italy's contributions to world agriculture, industry, and international trade. The course is taught in Italian using a variety of media and may provide out-of-class learning opportunities. Lecture (3.00). Prerequisite: LAN-221.

**LAN-240 Russian II (3.00 cr.)**

This course offers students an opportunity to enhance their skills in the speaking, reading, writing, and comprehension of Russian through active class use of vocabulary, grammar, and syntax. >General Education Course. Lecture (3.00), Laboratory (1.00). Prerequisite: LAN-114; minimum grade C.

**LAN-241 Intermediate Russian (3.00 cr.)**

This course expands students' Russian vocabulary and enhances their conversational ability. The course is conducted entirely in Russian and features extensive discussion of contemporary Russia and some grammar review. >General Education Course. Lecture (3.00). Prerequisite: LAN-240; minimum grade C.

**LAN-242 Intermediate Russian II (3.00 cr.)**

This course expands the students' vocabulary and enhances their conversational and reading ability through class discussions, pair/group work, simulations, and oral presentations. The course is conducted entirely in Russian with some grammar review and features extensive discussions of contemporary Russian culture. >General Education Course. Lecture (3.00). Prerequisite: LAN-241; minimum grade C.

**LAN-244 Irish II (3.00 cr.)**

This course offers students an opportunity to enhance their skills in the speaking, reading, writing, and comprehension of Irish, one of the Gaelic languages, through active class use of vocabulary, grammar, and syntax. >General Education Course. Lecture (3.00), Laboratory (1.00). Prerequisite: LAN-144; minimum grade C.

**LAN-245 Intermediate Irish I (3.00 cr.)**

This course expands students' Irish vocabulary and enhances their conversational ability in this Gaelic language. The course is conducted entirely in Irish and features extensive discussion of contemporary Irish-speaking regions in Ireland and some grammar review. >General Education Course. Lecture (3.00). Prerequisite: LAN-244; minimum grade C.

**LAN-250 Hispanic Society (3.00 cr.)**

This course is a study of the social, economic, political, and cultural histories of a variety of Spanish-speaking nations in Europe, America, and Africa. Prerequisite: Fluency in Spanish as determined by the Academic Department Chair is required. Lecture (3.00).

**LAN-255 Arabic II (3.00 cr.)**

This course offers students an opportunity to enhance skills in the speaking, reading, writing, and comprehension of Arabic through active class use of vocabulary, grammar, and syntax. >General Education Course. Lecture (3.00), Laboratory (1.00). Prerequisite: LAN-115; minimum grade C.

**LAN-256 Intermediate Arabic I (3.00 cr.)**

This course expands students' Arabic vocabulary and enhances their conversational ability. The course is conducted entirely in Arabic and features extensive discussion of the contemporary Arab World and some grammar review. >General Education Course. Lecture (3.00). Prerequisite: LAN-255; minimum grade C.

**LAN-257 Intermediate Arabic II (3.00 cr.)**

This course is conducted entirely in Arabic and develops students' Arabic communication skills through a study of the cultural history of the Arab World. >General Education Course. Lecture (3.00). Prerequisite: LAN-256; minimum grade C.

**LAN-260 Japanese II (3.00 cr.)**

This course offers students an opportunity to enhance their skills in the speaking, reading, writing, and comprehension of Japanese through active class use of vocabulary, grammar, and syntax. >General Education Course. Lecture (3.00), Laboratory (1.00). Prerequisite: LAN-120; minimum grade C.

**LAN-261 Intermediate Japanese I (3.00 cr.)**

This course expands students' Japanese vocabulary and enhances their conversational ability. The course is conducted entirely in Japanese and features extensive discussions of contemporary Japan and some grammar review. >General Education Course. Lecture (3.00). Prerequisite: LAN-260; minimum grade C.

**LAN-262 Intermediate Japanese II (3.00 cr.)**

This course expands the students' vocabulary and enhances their conversational and reading ability through class discussions, pair/group work, simulations, and oral presentations. The course is conducted entirely in Japanese with some grammar review and features extensive discussions of contemporary Japanese culture. >General Education Course. Lecture (3.00). Prerequisite: LAN-261; minimum grade C.

**LAN-265 Korean II (3.00 cr.)**

This course offers students an opportunity to enhance their skills in the speaking, reading, writing, and comprehension of Korean through active class use of vocabulary, grammar and syntax. >General Education Course. Lecture (3.00), Laboratory (1.00). Prerequisite: LAN-165; minimum grade C.

**LAN-266 Intermediate Korean I (3.00 cr.)**

This course expands students' Korean vocabulary and enhances their conversations ability. The course is conducted entirely in Korean and features extensive discussion of contemporary Korea and some grammar. >General Education Course. Lecture (3.00). Prerequisite: LAN-265; minimum grade C.

**LAN-270 American Sign Language II (3.00 cr.)**

This course is a continuation of American Sign Language I designed to develop further competency in ASL. Students will be given the opportunity to enhance both expressive and receptive skills by increasing vocabulary and knowledge of grammar. Students will be expected to interact with the deaf community in real-life settings thereby enhancing their awareness of and sensitivity to various aspects of Deaf Culture and ASL. >General Education Course Lecture (3.00), Laboratory (1.00). Prerequisite: LAN-170.

**LAN-271 Intermediate American Sign Language I (3.00 cr.)**

This course expands the students' vocabulary and enhances their expressive and receptive skills through class discussions, pair/group work, simulations, and presentations. The course is conducted entirely in American Sign Language. It includes grammar review and features extensive discussions of Deaf culture. >General Education Course. Lecture (3.00). Prerequisite: LAN-270; minimum grade C.

**LAN-272 Intermediate American Sign Language II (3.00 cr.)**

This course develops American Sign Language communication skills through the study of the cultural history of the Deaf community. It is conducted entirely in American Sign Language. >General Education Course. Lecture (3.00). Prerequisite: LAN-271; minimum grade C.

**LAN-276 Chinese (Mandarin) II (3.00 cr.)**

This course offers students an opportunity to enhance their skills in listening, speaking, reading, writing, and comprehension of Chinese through active class use of vocabulary, grammar, and syntax. >General Education Course Lecture (3.00), Laboratory (1.00). Prerequisite: LAN-116; minimum grade C.

**LAN-277 Intermediate Chinese (Mandarin) I (3.00 cr.)**

This course expands students' Chinese vocabulary and enhances their conversational ability. the course is conducted entirely in Chinese and features extensive discussion of contemporary China and some grammar. >General Education Course. Lecture (3.00). Prerequisite: LAN-276; minimum grade C.

**LAN-278 Intermediate Chinese (Mandarin) II (3.00 cr.)**

This course is conducted entirely in Chinese and develops students' Chinese communication skills through a study of the culture of china and some grammar. >General Education Course. Lecture (3.00). Prerequisite: LAN-277; minimum grade C.

**LAN-280 Hebrew II(3.00 cr.)**

This course offers students an opportunity to enhance their skills in listening, speaking, reading, writing, and comprehension of Hebrew through active class use of vocabulary, grammar, and syntax. >General Education Course. Lecture (3.00), Laboratory (1.00). Prerequisite: LAN-180.

**LAN-289 Latin II (3.00 cr.)**

This course offers students an opportunity to enhance their skills in translating, reading, writing, speaking, and comprehension of Latin through active class use of vocabulary, grammar, syntax, and their knowledge of Roman culture. Class sessions will include discussions, translations, pair/group work, simulations, oral presentations, and extensive discussions on Roman culture. >General Education Course. Lecture (3.00), Laboratory (1.00). Prerequisite: LAN-119; minimum grade C.

**LGL – PARALEGAL STUDIES****LGL-101 Fundamentals of Law (3.00 cr.)**

This course is an introduction to the principles of substantive law in the fields of contracts, legal ethics, sales, consumer remedies, torts, crimes, and secured transactions, and analyzes the court systems. Lecture (3.00).

**LGL-103 Legal Search and Writing (3.00 cr.)**

This course is an introduction to legal practice. Topics covered include law office systems, legal research, legal forms, and briefs. Research problems

and case memo term papers are assigned. Lecture (2.00), Laboratory (2.00). Corequisite: WRT-101.

**LGL-110 Legal Ethics (3.00 cr.)**

This is a survey course dedicated to the analysis and application of New Jersey Legal Ethics Issues. Emphasis is placed on understanding New Jersey Rules of Professional Responsibility, New Jersey Supreme Court Office of Attorney Ethics Advisory Opinions, ABA Model Rules, Canons of Professional Ethics, and the professional and regulatory structure of the practice of law. The course will also explore the disciplinary and licensing process applicable to legal professionals. Students to identify, evaluate, and respond to legal ethical issues. Lecture (3.00).

**LGL-150 School Law (3.00 cr.)**

This course is a study of New Jersey school laws, the rules and regulations of the New Jersey State Board of Education, the functions of the State Commissioner of Education, and the relationship of school district organization to other units of government. Lecture (3.00).

**LGL-165 Elder Law (1.00 cr.)**

This is a survey course of the law concerning the rights, duties, and responsibilities of persons over the age of 60. Topics covered include incompetency procedures, guardianships and other protective arrangements, Medicare and Medicaid, long-term planning and strategies, protection of the assets from creditors and family members, health benefits, social security, and special estate planning for the remarried elderly. Lecture (1.00).

**LGL-200 Business Communications for Paralegals (3.00 cr.)**

This course covers the communications skills of writing, speaking, and listening, with particular applications to paralegals. Emphasis is placed on effective techniques to be used in interviews and meetings. Students learn how to prepare letters, memos, and reports. Oral presentations are included. Lecture (3.00). Prerequisites: LGL-101, LGL-103.

**LGL-202 New Jersey and Federal Courts (3.00 cr.)**

This course is a study of the Rules of Court for the New Jersey Court System as they relate to court processes and procedures including pleadings, depositions, interrogatories, summary judgment, appellate practice, and rules of evidence. Lecture (3.00). Prerequisites: LGL-101, LGL-103, LGL-203, and LGL-220.

**LGL-203 Paralegalism and Legal Procedure (3.00 cr.)**

This course is a study of the role of a paralegal in the public sector. Topics of discussion include ethics and litigation support including methods of investigating cases and of preparing legal memoranda and other legal documents. Lecture (2.00), Laboratory (2.00). Prerequisites: LGL-101 and LGL-103.

**LGL-205 Mechanics of Property Transactions(3.00 cr.)**

This course is a study of New Jersey real estate legal practice and procedures concentrating on such topics as conveyance, forms, and the theory and practice of real estate transactions. Sample cases are used to illustrate the paralegal's role in a real property conveyance. Students examine case studies and prepare a sample problem from contract to closing. Lecture (3.00). Prerequisites: LGL-101, LGL-103, LGL-220, and REA-101.

**LGL -206 Mechanics of Commercial Transactions (3.00 cr.)**

This course is a study of legal forms, procedure and practice for organizing a business entity, sale of a business, equipment leasing, and other commercial transactions. Students examine case studies and prepare a sample problem for sale of a business. Lecture (3.00). Prerequisites: LGL-101, LGL-103, and LGL-220.

**LGL-207 Wills and Administrations (3.00 cr.)**

This course is a study of the New Jersey law of wills, probate, and estate administration. Topics of discussion include the preparation of wills, probate procedures, and the preparation of New Jersey Inheritance and Federal Estate Tax forms. Lecture (3.00). Prerequisites: LGL-101, LGL-103, and LGL-220.

**LGL-208 Mechanics of Family Law (3.00 cr.)**

This course is an introduction to New Jersey family law. Topics of discussion include divorce, annulment, equitable distribution of assets, child custody, alimony, and support and visitation of children. New Jersey forms

and procedures are reviewed. Students examine case studies and prepare matrimonial pleadings and pretrial memoranda. Lecture (3.00). Prerequisites: LGL-101, LGL-103, and LGL-220.

#### **LGL-209 Nonprofit Law (3.00 cr.)**

This course is dedicated to the analysis and application of New Jersey Nonprofit Corporation Law. Emphasis is placed on understanding New Jersey Statutes Title 15A. The course explores the effective and practical use of the nonprofit corporation from formation, application in business practices to dissolution. Students learn about formation, corporate powers, specific purpose nonprofits, tax aspects, boards, officers, minutes, registered agents, meetings and dissolution of nonprofits. Lecture (3.00). Prerequisite: BUS-115.

#### **LGL-210 Legal Accounting (3.00 cr.)**

This course is a study of accounting concepts for the paralegal. The trust and escrow accounting reporting rules of the New Jersey Supreme Court are discussed. Hourly records, billing procedures, and accounting concepts are studied as they relate to legal situations. Lecture (2.00), Laboratory (2.00). Prerequisites: LGL-101, LGL-101, and LGL-203.

#### **LGL-219 Hospitality Law (3.00 cr.)**

This course provides industry specific legal fundamentals to students and practicing professionals in the hospitality industry. It introduces basic foundations and principles of the law affecting the hospitality industry and introduces guidelines and techniques that show managers how to manage preventively and apply a practical legal awareness to their actions. Lecture (3.00). Prerequisite: HRM-101.

#### **LGL-220 Computer Assisted Legal Research (3.00 cr.)**

This course introduces the student to modern technologies that allow efficient and accurate legal research. The course incorporates Westlaw, legal software, and the Internet into the legal research process and requires students to complete assigned computer research projects. Lecture (2.00), Laboratory (2.00). Prerequisites: LGL-101 and LGL-103.

#### **LGL-230 Bankruptcy Law (1.00 cr.)**

This course teaches paralegals the procedures, forms, and schedules used in bankruptcy cases. Lecture (1.00). Prerequisites: LGL-202 and LGL-203.

#### **LGL-231 Environmental Claims (1.00 cr.)**

This course teaches paralegals the practice and procedures in the specialized field of environmental claims-tort liability. Lecture (1.00). Prerequisites: LGL-203 and LGL-205.

#### **LGL-232 Immigration Law (1.00 cr.)**

This course teaches paralegals the practices and procedures in the specialty of immigration law. Lecture (1.00). Prerequisite: LGL-203.

#### **LGL-233 Intellectual Property (1.00 cr.)**

This course teaches paralegals the practices and procedures used in the emerging specialty of filing and protecting intellectual property such as trade names, patents and copyrights. Lecture (1.00). Prerequisites: LGL-203 and LGL-206.

#### **LGL-234 Personal Injury and Product Liability (3.00 cr.)**

This course teaches paralegals the practice and procedures used in the developing specializations of personal injury and product liability torts. Students will examine case studies and will prepare legal forms for sample case problems. Lecture (2.00), Laboratory (2.00). Prerequisites: LGL-203 and LGL-220.

#### **LGL-235 Tax Law (1.00 cr.)**

This course teaches paralegals the tax implications of common problems faced in law offices. Topics covered include business acquisitions and IRS regulations. Lecture (1.00). Prerequisites: LGL-203 and ACC-103.

#### **LGL-236 Employment Law (2.00 cr.)**

This course is for employees and employers concerning hiring, managing, and terminating employees and special protections available to employers and employees under statutes and cases. The course emphasizes recent developments in the law. Lecture (2.00). Prerequisite: LGL-101.

#### **LGL-237 Rules of Evidence (1.00 cr.)**

This course is a review of the rules of evidence as applied to court proceedings that include competency to testify, best evidence, hearsay,

relevancy, impeachment of a witness, and other evidence rules. Lecture (1.00). Prerequisite: LGL-101.

#### **LGL-462 Co-Op Work Experience (Paralegal) (2.00 cr.)**

This course requires part-time student employment in a law office, banking institution, court or other law-related position and aims at giving students insight into the methods and procedures used by paralegals. Job assistance is available through the Co-Op office. Lecture (1.00), Cooperative (12.00). Prerequisites: LGL-101, LGL-103, LGL-202, LGL-205, LGL-208, and LGL-220, WRT-101 minimum grade C.

### LGN – LEGAL NURSE CONSULTANT

#### **LGN-105 Principles of Legal Nurse Consulting (3.00 cr.)**

This course examines the history and evolution of nurse consulting and legal theories. The role of the legal nurse consultant is explored as it relates to the review and analysis of medical records, litigation process, trial and witness preparation, standards of care, risk management, insurance issues, and alternative forms of dispute resolution. Business principles for legal nurse consultants are also covered. Lecture (3.00).

#### **LGN-201 Health Law (3.00 cr.)**

This course provides an overview of the American health care system, examining its historical origins and the interplay of competing interests. It examines managed care organizations (MCOs) including (HMOs, PPOs, PHOs, IPAs, etc.); and MCO regulatory issues, such as licensing and certificate-of-need requirements and patient rights legislation; legal implications of the transactions engaged in by MCOs; fraud and abuse in the health care system; managed care contracting including contract drafting and analysis; legal issues concerning hospitals; Medicare and Medicaid; interaction health law with medical malpractice. Lecture (3.00). Prerequisites: LGN-105, LGL-101, and LGL-103.

#### **LGN-204 Medical Legal Ethics, Records, and Writing (3.00 cr.)**

This course requires the production and preparation of medical records summaries that includes identifying standards of care; accessing, interpreting and summarizing medical records; interviewing clients; medical witnesses and preparation of the legal nurse consultant's report. Additionally, the course covers legal and medical ethics. Lecture (3.00), Laboratory (1.00). Prerequisites: LGL-101, LGL-103, LGL-203, LGL-234, LGN-105, and LGN-201.

#### **LGN-210 Advanced Medical Legal Research (3.00 cr.)**

This course develops advanced research skills employing Westlaw, Medical, and Internet research. Students will become facile users of legal and medical databases online, including the Internet. Course focuses on medical and legal research used in determining appropriate standards of care. Lecture (3.00), Laboratory (1.00). Prerequisites: LGL-101, LGL-103, LGN-105, and LGN-204.

#### **LGN-462 Co-Op Work Experience (Legal Nurse) (2.00 cr.)**

This course requires that the student complete all legal nurse specialty courses with a grade of C or better. This course can only be taken in the last semester of the Legal Nurse Program. The student must meet with the instructor and jointly prepare an agreed 179-hour lab for the course that will include on-site study and assignments in a legal nurse setting such as a hospital, HMO, doctor's office or law office plus sample medical-legal research and document assignments from the instructor. In addition, the course will meet one (1) hour each week. Two or more class absences will require repeat of the course. Lecture (1.00), Cooperative (12.00). Prerequisites: LGN-105, LGN-201, LGN-204, and LGN-210.

### LIT – LITERATURE

#### **LIT-201 American Literature to 1880 (3.00 cr.)**

This course is a study of representative American literature from its origins to the late nineteenth century. Students read selections from such areas as exploration narratives and Native American poetry, and from such authors as Bradstreet, Edwards, Douglass, Emerson, Hawthorne, Melville, Dickinson, and Whitman. >General Education Course. Lecture (3.00). Prerequisite: WRT-101.

#### **LIT-202 American Literature 1880 to Present (3.00 cr.)**

This course is a study of representative American literature from the late nineteenth century to the present. Students read works by such authors as

Twain, O'Neill, Hurston, Hemingway, Faulkner, Frost, Wright, Ginsberg, and Rich. >General Education Course. Lecture (3.00). Prerequisite: WRT-101.

#### **LIT-203 World Literature to 1650 (3.00 cr.)**

This course is a study of world authors to the sixteenth century. Students read works such as Gilgamesh; selections from the Old and New Testaments, the Ramayana; and writings of such authors as Homer, Aeschylus, Li Po, Dante, Shakespeare, and Sor Juana. >General Education Course. >Diversity Course. Lecture (3.00). Prerequisite: WRT-101.

#### **LIT-204 World Literature 1650 to Present (3.00 cr.)**

This course is a study of world authors from the sixteenth century to the present. Students read works by such authors as Wu Ch'Eng-En, Racine, Goethe, Flaubert, Tolstoy, Eliot, Mahfouz, and Achebe. >General Education Course. >Diversity Course. Lecture (3.00). Prerequisite: WRT-101.

#### **LIT-205 English Literature to 1800 (3.00 cr.)**

This course is a study of British literature from Anglo-Saxon times to the late eighteenth century. Students read works such as Beowulf and such authors as Chaucer, Kempe, Shakespeare, Milton, Dryden, Pope, and Swift. >General Education Course. Lecture (3.00). Prerequisite: WRT-101.

#### **LIT-206 English Literature 1800 to Present (3.00 cr.)**

This course is a study of British literature from the Romantic period to the present. Students read works by such authors as Blake, Wordsworth, Austen, Hardy, Dickens, Yeats, Lawrence, Woolf, and Thomas. >General Education Course. Lecture (3.00). Prerequisite: WRT-101.

#### **LIT-215 Black Literature in America (3.00 cr.)**

This course is a study of major African-American authors. The course provides a literary, historical, and sociological survey of the African-American experience. Students read works by such authors as Wheatley, Douglass, Ellison, Hurston, Baldwin, Malcolm X, Morrison, and Walker. >General Education Course. >Diversity Course. Lecture (3.00). Prerequisite: WRT-101.

#### **LIT-216 European Literature to 1650 (3.00 cr.)**

This course is a study of European authors from Greco-Roman times to the Renaissance. Representative works are studied in their historical context. The course includes selections from such works as the Bible, ancient Greek tragedies and comedies, medieval epics and dramas, and such authors as Sappho, Plato, Virgil, Dante, Marie de France, Shakespeare, and Milton. >General Education Course. Lecture (3.00). Prerequisite: WRT-101.

#### **LIT-217 European Literature 1650 to Present (3.00 cr.)**

This course is a study of European literature from the Neoclassical period to the present. Representative works are studied in their historical context. The course includes selections from such areas as Romantic and Victorian poetry, the nineteenth century novel, and existentialism, and such authors as Racine, Austen, Goethe, Dostoyevsky, the Symbolists, Kafka, Woolf, Mann, and the Post-Moderns. >General Education Course. Lecture (3.00). Prerequisite: WRT-101.

#### **LIT-218 American Ethnic Literature (3.00 cr.)**

This course examines the literature of America's ethnic groups. The course draws upon significant works of fiction, poetry, drama, and autobiography written by representatives of such groups as Native Americans, Hispanics, Irish, Jews, Asians, Blacks, and Italians. >General Education Course. >Diversity Course. Lecture (3.00). Prerequisite: WRT-101.

#### **LIT-219 Topics in American Literature (3.00 cr.)**

This course is an exploration of major themes in the literature of the United States. Each semester a specific theme is developed through the study of literary works that are representative of the diversity of American culture. Lecture (3.00). Prerequisite: WRT-101.

#### **LIT-220 Social Aspects of Literature (3.00 cr.)**

This course examines various concerns and issues that exist within human communities. The course allows students to explore social structures and the role of the individual within a larger social context, with the aim of developing a greater understanding of the interaction of self and society. Literary texts provide the foundation for discussion and analysis. Lecture (3.00). Prerequisite: WRT-101.

#### **LIT-221 Shakespeare (3.00 cr.)**

This course is an introduction to the works of William Shakespeare. Students will read several plays and sonnets. The variety of Shakespeare's themes, such as the nature of love, betrayal, leadership, and the power of art, will be examined. >General Education Course. Lecture (3.00). Prerequisite: WRT-101.

#### **LIT-222 Introduction to Literary Criticism (3.00 cr.)**

This course provides students with the tools of literary critical theory. Students will be exposed to a variety of critical theories and will gain proficiency in applying these theories to selected poems, short stories, and novels. Lecture (3.00). Prerequisite: WRT-101.

#### **LIT-223 Contemporary Latin American Literature (3.00 cr.)**

In this course, students will read poetry, essays, short prose, and novels from several Latin American nations including Colombia, Peru, Cuba, Argentina, Mexico, Brazil, Puerto Rico, Dominican Republic, and Chile. We will also examine Latin American literature from various critical perspectives. >Diversity Course. Lecture (3.00). Prerequisite: WRT-101.

#### **LIT-224 International Literature (3.00 cr.)**

This course is an exploration of major themes in the literature of various cultures. Each semester a specific theme is developed through the study of literary works that are representative of a number of nations and cultures. >Diversity Course. Lecture (3.00). Prerequisite: WRT-101.

#### **LIT-225 Modern Irish Literature (3.00 cr.)**

This course is a study of the Irish literary revival of the nineteenth and twentieth centuries. The works of such major Irish authors as Synge, Yeats, O'Casey and Joyce are discussed, with special emphasis upon their adaptation of Celtic mythological material and their reactions to the political, cultural, and social conditions of modern Irish society. Lecture (3.00). Prerequisite: WRT-101.

#### **LIT-226 Introduction to the Novel (3.00 cr.)**

This course is an introduction to the novel as a literary genre from its beginnings to the present. Authors to be studied may include, but are not limited to, Lady Murasaki, Cervantes, Richardson, Fielding, Voltaire, Austen, Melville, Dickens, Eliot, Flaubert, Dostoyevsky, James, Joyce, Garcia Marquez, Achebe, Mahfouz, and Bolano. Lecture (3.00). Prerequisite: WRT-101.

#### **LIT-228 Women in Literature (3.00 cr.)**

This course is a study of representative works by women writers in a variety of forms. The course provides a literary, historical, and sociological context for the study of this literature. Students read works by such authors as Julian of Norwich, Dickinson, Chopin, Woolf, Emecheta, Morrison, and Tan. >General Education Course. >Diversity Course. Lecture (3.00). Prerequisite: WRT-101.

#### **LIT-230 Psychology Ideas in Literature (3.00 cr.)**

This is a course in which students read and study psychological ideas in literature. Themes such as exile, the unconscious, psychosis, and dreams will be addressed. Works range from antiquity to the present. The basic objective of the course is to raise provoking questions about psychological ideas in literature and to draw out the many ways in which psychology informs and offsets a literary perspective. >General Education Course. Lecture (3.00). Prerequisite: WRT-101.

### MAT – MATHEMATICS

#### **MAT-010 Basic Mathematics Support (1.00 cr.)**

This course is a recitation class designed to provide additional instructional time for students enrolled simultaneously in MAT-011. Lecture (1.00).

#### **MAT-011 Basic Mathematics (3.00 cr.)**

This course is a study of the fundamental operations of arithmetic, intended for students whose placement examination indicates a need for review of arithmetic skills. Lecture (3.00).

#### **MAT-012 Basic Mathematics Accelerated (Computer Assisted) (1.00 cr.)**

This course is a computer-assisted class designed to provide the necessary reinforcement needed to complete the Basic Mathematics, MAT-011,

requirements. Lecture (1.00). Corequisites: MAT-031/MAT-032 or MAT-035.

**MAT-030 Algebra Review (1.00 cr.)**

This course is designed for students with previous experience in high school algebra who wish to review prior to placement testing. Review topics include first and second-degree equations, rational expressions, polynomials, factoring, graphing, systems of equations, and radicals. While MAT-030 might help prepare students for placement testing, it does not replace the remedial algebra required of students once they fall below the cutoff scores on the placement exam. Lecture (1.00).

**MAT-031 Algebra A (3.00 cr.)**

This course is the first half of a two-semester basic algebra course equivalent in content to and satisfying the requirements of MAT-035. These courses are designed for the student who has not studied algebra previously, or for the student who has found algebra to be a difficult subject. Students who are placed in MAT-035 may elect to enroll in the MAT-031 and MAT-032 sequence. Lecture (3.00). Prerequisite: MAT-011.

**MAT-032 Algebra B (3.00 cr.)**

This course is the second half of a two-semester basic algebra course equivalent in content to and satisfying the requirements of MAT-035. These courses are designed for the student who has not studied algebra previously, or for the student who has found algebra to be a difficult subject. Students who are placed in MAT-035 may elect to enroll in the MAT-031 and MAT-032 sequence. Lecture (3.00). Prerequisites: MAT-011 or MAT-012, and MAT-031.

**MAT-033 Algebra A Support (1.00 cr.)**

This course is a recitation class designed to provide additional instructional time for students enrolled simultaneously in MAT-031. Lecture (1.00).

**MAT-034 Algebra B Support (1.00 cr.)**

This course is a recitation class designed to provide additional instructional time for students enrolled simultaneously in MAT-032. Lecture (1.00).

**MAT-035 Algebra (4.00 cr.)**

This course is a basic algebra course for students whose placement examination indicates a need for review in algebra. Topics include signed numbers, variables, literal equations and formulas, square roots, exponents, polynomials, linear and quadratic equations, and rational expressions. Lecture (4.00). Prerequisite: MAT-011.

**MAT-090 Intermediate Algebra Support (1.00 cr.)**

This course is a recitation class designed to provide additional instructional time for students enrolled in or repeating MAT-160. Lecture (1.00). Prerequisite: MAT-032 or MAT-035; minimum grade C. Corequisite: MAT-160.

**MAT-091 Pre-Calculus Support (1.00 cr.)**

This course is a recitation class designed to provide additional instructional time for students enrolled in or repeating MAT-180. Lecture (1.00). Prerequisite: MAT-160; minimum grade C. Corequisite: MAT-180.

**MAT-092 Calculus I Support (1.00 cr.)**

Calculus I Support is a recitation class designed to provide additional instructional time for students enrolled simultaneously in MAT-280. Lecture (1.00). Prerequisite: MAT-180; minimum grade C. Corequisite: MAT-280.

**MAT-093 Calculus II Support (1.00 cr.)**

This course is a recitation class designed to provide additional instructional time for students enrolled simultaneously in MAT-281. Lecture (1.00). Prerequisite: MAT-280; minimum grade C. Corequisite: MAT-281.

**MAT-130 Contemporary Mathematics (3.00 cr.)**

This course is a study of some of the fundamental concepts in mathematics. Topics considered include set theory, symbolic logic, number systems, principles of counting, and probability. Applications of these topics in various fields of study are included in the course. >General Education Course. Lecture (3.00). Prerequisites: MAT-031/MAT-032, or MAT-035, or MAT-160.

**MAT-150 Statistics I (3.00 cr.)**

This course is a study of frequency distributions, measures of central tendency and dispersion, probability, the normal distribution, sampling and

sampling distributions, the central limit theorem, confidence interval estimation, and hypothesis testing. >General Education Course. Lecture (3.00). Prerequisites: MAT-031/MAT-032 or MAT-035.

**MAT-155 Finite Mathematics (3.00 cr.)**

This course is an introduction to the solution of problems in the management, natural, behavioral, and social sciences. Topics covered include mathematical models, matrices, linear systems, and linear programming. >General Education Course. Lecture (3.00). Prerequisite: MAT-031/MAT-032 or MAT-035 or MAT-045.

**MAT-160 Intermediate Algebra (4.00 cr.)**

This course is the study of polynomial and rational expressions, integral and fractional expressions, roots and radicals, linear and quadratic equations, functions, elementary curve sketching, inequalities. Lecture (4.00). Prerequisite: MAT-031/MAT-032 or MAT-035; minimum grade C.

**MAT-180 Precalculus: College Algebra and Trigonometry (4.00 cr.)**

This course is a study of coordinate geometry; functions and graphing; polynomial and rational functions; exponential, logarithmic, trigonometric, and inverse trigonometric functions; analytic geometry, and applications. >General Education Course. Lecture (4.00). Prerequisite: MAT-160; minimum grade C.

**MAT-223 Calculus for the Managers in the Social Sciences (3.00 cr.)**

This course covers the essential ideas of the Calculus: functions, limits, continuity, differentiation and integration. The course includes applications to problems in business, economics, psychology, the social sciences and mathematical modeling. >General Education Course. Lecture (3.00). Prerequisite: MAT-160; minimum grade C.

**MAT-250 Statistics II (3.00 cr.)**

This course is an introduction to methods for the design of research studies and the interpretation of data that result from these studies. Topics considered include a brief review of elementary statistical concepts, additional cases of hypothesis testing and estimation, analysis of variance, analysis of enumerative data, linear regression and correlation, and nonparametric statistics. Laboratory assignments using a statistical software package are included in the course. >General Education Course. Lecture (2.00), Laboratory (2.00). Prerequisite: MAT-150; minimum grade C.

**MAT-268 Statistical Methods (4.00 cr.)**

This course provides the student with a foundation in the techniques that underlie more advanced courses in statistics. Topics include descriptive statistics, sampling distributions, hypotheses testing and estimation for one and two populations, goodness-of-fit and contingency tables, analysis of variance, linear regression and correlation, and nonparametric statistics. Lecture (4.00). Prerequisite: MAT-160; minimum grade C.

**MAT-280 Calculus I (4.00 cr.)**

This course is a study of limits, continuity, the derivative of a function, differentiation of algebraic, trigonometric, inverse trigonometric, exponential and logarithmic functions, applications of the derivative, antidifferentiation, area under a curve, the definite integral, the Fundamental Theorem of the Calculus and its applications. >General Education Course. Lecture (4.00). Prerequisite: MAT-180; minimum grade C.

**MAT-281 Calculus II (4.00 cr.)**

This course is a study of differentiation and integration of transcendental functions, methods of integration, applications of the integral, indeterminate forms, improper integrals, infinite series, and applications. >General Education Course. Lecture (4.00). Prerequisite: MAT-280; minimum grade C.

**MAT-282 Calculus III (4.00 cr.)**

This course is a study of vectors, parametric equations, polar coordinates, partial differentiation, directional derivatives, gradients, line integrals, multiple integrals and applications. >General Education Course. Lecture (4.00). Prerequisite: MAT-281; minimum grade C.

**MAT-283 Differential Equations(4.00 cr.)**

This course covers equations of order 1, linear equations with constant coefficients, non-homogeneous equations, variation of parameters, series solutions, equations with variable coefficients, Laplace transforms, convolutions, boundary value problems, Fourier transforms and applications. Lecture (4.00). Prerequisite: MAT-282; minimum grade C.

**MAT-285 Discrete Mathematics (4.00 cr.)**

This course is a study of mathematical concepts and techniques that form the foundation for many upper level mathematics courses. Topics considered include sets and logic, proof techniques, functions and relations, algorithms, introduction to number theory, counting techniques, discrete probability, recurrence relations, trees, graphs, networks, and Boolean algebra. Mathematical reasoning and proofs with be stressed. Lecture (4.00). Prerequisite: MAT-280; minimum grade C.

**MAT-286 Linear Algebra (4.00 cr.)**

This course is a study of finite dimensional vector spaces. Topics considered include vectors and vector spaces, matrices, determinants, systems of linear equations, linear transformations, quadratic forms, eigenvalues and eigenvectors, and applications. Lecture (4.00). Prerequisite: MAT-280.

**MFG – MANUFACTURING TECHNOLOGY****MFG-119 Pro/Engineer Design I (3.00 cr.)**

This course is a study of the basic functionality and use of Parametric Technology's (PTC) Pro/Engineer Wildfire 3D solid modeling software. Emphasis will be placed on the technology as well as the terminology in relation to this advanced tool. Lecture and lab will be used to teach not only how to use specific features of the software but also how to use it in design. Lecture (2.00), Laboratory (3.00).

**MFG-122 Machine Tool Principles I (3.00 cr.)**

This course introduces students to the basic hands-on theoretical skills necessary of a machinist. Machining processes such as drilling, milling, turning, and grinding will be studied and developed. Theoretical skills such as machine terminology, speeds and feeds, uses of machinery handbook, and safety issues are also included. It would be beneficial if incoming students had some exposure to basic machining principles and equipment. Lecture (2.00), Laboratory (2.00).

**MFG-124 Applied Metrology (3.00 cr.)**

This course is the study of the fundamental skills used by machinists for the calibration and quality control of measurements and their application. Students will study and use precision measuring equipment such as calipers, dial indicators, gauges, and hole measuring devices in a practical laboratory. Use of Coordinate Measurement Machine and Optical Comparator will also be Introduced. Lecture (2.00), Laboratory (2.00).

**MFG-130 Welding Technology I (3.00 cr.)**

This course is an introduction to metal joining techniques using welding, brazing, and soldering with an emphasis on safe work practices. This course provides students with a basic understanding of electricity as applied to electric arc welders, metallurgy of welding, welding processes and safe use of oxy/fuel welding and heating. Students will study theory and techniques in a classroom environment. Demonstrations and applications will be performed in a laboratory setting. Lecture (2.00), Laboratory (2.00).

**MFG-206 Concepts of Industrial Design (3.00 cr.)**

This course is an exploration of 2D and 3D techniques used by industrial designers to communicate ideas for new products and product designs. Course includes a brief history of industrial design. Exercises in ideation and conceptualization will be used to familiarize students with design development philosophy. Use of freehand drawing techniques and drafting skills will be explained to produce presentations of proposed product concepts. Model making techniques will be explored to develop 3D communication skills. Lecture (2.00), Laboratory (2.00). Prerequisite: DFT-107.

**MFG-219 Pro/Engineer Design II (3.00 cr.)**

This course is a study of the Intermediate to advanced functionality of Parametric Technology Corporation's Pro/Engineer 3D solid modeling software. Emphasis will be placed on the technology as well as the various design techniques in relation to this advanced tool. Lecture and lab will be used to teach not only how to use specific features of the software but also

how to use it in design. Lecture (2.00), Laboratory (3.00). Prerequisite: MFG-119.

**MFG-220 Pro/Engineer Design III (3.00 cr.)**

This course includes advanced techniques for the design and analysis using Pro/Engineer, Pro/Sheetmetal, and Pro/Mechanica. Emphasis will be placed on the technology as well as utilizing advanced techniques in relation to both lab exercises as well as a practical design. Lecture, lab, and a comprehensive project will be used to teach how to use specific features of the software in relation to product design. Lecture (2.00), Laboratory (3.00). Prerequisite: MFG-219.

**MFG-221 Pro/Engineer Design IV (3.00 cr.)**

This course includes advanced techniques for the design and analysis using Pro/Engineer Pro/Mechanica. Emphasis will be placed on the technology as well utilizing advanced techniques in relation to both lab exercises as well as practical design. Lecture, lab, and a comprehensive project will be used to teach how to use specific features of the software in relation to product design. Lecture (2.00), Laboratory (3.00). Prerequisite: MFG-220.

**MFG-222 Machine Tool Principles II (3.00 cr.)**

This course continues the work of Machine Tool Principles I by broadening the basic skills of a machinist by introducing Intermediate and advanced topics such as milling and turning tools and their geometry, tool inserts, coolants and basic metallurgy. Students will experience these topics both in theory and hands-on in a practical laboratory setting. Lecture (2.00), Laboratory (2.00). Prerequisite: MFG-122.

**MFG-226 Methods, Fixture Design, and Estimating (3.00 cr.)**

This course will explore and develop the skills necessary to visualize effectively and economically make precision-machined parts. Students will learn how to select materials, type of process, type of equipment, sequence of operations, fixtures, tools, etc. Methods development and documentation will be demonstrated and practiced. Jig and fixture types and design criteria will be reviewed. Lecture (2.00), Laboratory (2.00)..Prerequisite: DFT-210 or MFG-119.

**MFG-227 CNC Programming I (4.00 cr.)**

This course provides the fundamentals of programming Computer Numerical Control equipment with a heavy concentration on CNC turning and machining centers. Included in this course will be language and graphics-based programming, automated features and capabilities, advanced CNC applications and integration. Students will receive hands-on programming experience using industry preferred software and controllers. Lecture (2.00), Laboratory (4.00). Prerequisite: MFG-229. Corequisites: DFT-210 and MFG-119.

**MFG-228 CNC Programming II (4.00 cr.)**

This course continues the work of CNC Programming I by expanding the skills of programming with advanced techniques and equipment such as 5-Axis programming, use of A, B, and C-Axes, development and use of macros, program verification, and troubleshooting. MasterCAM software for the use of part design, NC code production, and back-plotting will be introduced. Lecture (2.00), Laboratory (2.00). Prerequisite: MFG-227.

**MFG-229 Materials Processing and Fabrication (4.00 cr.)**

This course will include both an overview of materials and processes used in the manufacture of precision products and a practical exploration of fabrication techniques used in industry. A comparative study of casting, welding, heat treating, molding, laminating, EDM, CNC machining, grinding, etc. will be undertaken, as well as forming processes such as rolling, shearing, stamping, cutting, and joining methods for metallic and non-metallic materials. Lecture (2.00), Laboratory (4.00). Prerequisites: MFG-122, MFG-124, and DFT-107.

**MFG-230 Welding Technology II (3.00 cr.)**

This course expands on the concepts and applications presented in MFG-130. Further exploration of the construction of welded components and the metallurgical effects on more exotic materials will take place. Students will study the application of welding to aluminum, magnesium, copper alloys, nickel and cobalt alloys, lead, and zinc. Related safety and health considerations will be addressed. Lecture (2.00), Laboratory (2.00). Prerequisite: MFG-130.

**MFG-463 Co-Op Work Experience (Manufacturing) (3.00 cr.)**

This course provides students with hands on experience in a work environment. The workplace is the primary learning laboratory where students apply classroom theory under professional guidance. Faculty members do on-site evaluations. 180 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (12.00).

**MFG-464 Co-Op Work Experience (Manufacturing) (4.00 cr.)**

This course provides the student with practical, supervised work experience within the broad field of manufacturing technology. Through on-the-job experience, students can acquire the practical expertise and knowledge needed to pursue a career in this field. Students are supervised by a faculty member, and job placement assistance is available through the Co-Op Office. 240 minimum hours work experience distributed over the semester or over combined summer sessions. Lecture (1.00), Cooperative (16.00).

**MOA – MEDICAL OFFICE ASSISTANT****MOA-140 Medical Terminology (3.00 cr.)**

This course provides an introduction to the basic structure of medical words, including prefix, suffixes, roots, combining forms, and the formation of plurals. Emphasis is placed on the correct pronunciation, spelling, and definition of medical terms, allowing the student to build a professional vocabulary for working in the medical field. Lecture (3.00). Corequisite: MOA-244.

**MOA-141 Introduction to Medical Assisting (3.00 cr.)**

This course is a study of the professional attitudes and behavior required of medical assistants. The fundamentals of meeting the special needs of patients are also studied. The fundamental principles of human relations and the importance of professional growth and communication skills are stressed. Additional emphasis is placed on development of medical science, health agencies, medical specialties, and common disease processes. Lecture (3.00).

**MOA-145 Medical Office Assisting: An Overview (3.00 cr.)**

This course is offered to candidates for the Certified Medical Assistant Examination administered by the American Association of Medical Assistants. Subjects to be covered in the course are medical terminology, human relations, medical law and ethics, anatomy and physiology, administrative procedures, and clinical procedures. Lecture (3.00). Corequisite: MOA-244.

**MOA-200 Pharmacology for Medical Office Assistants (2.00 cr.)**

This course introduces the student to drug practices, procedures, and preparations utilized in ambulatory care settings. Topics include legislation, drug sources, classifications, and actions. Emphasis is placed on function of drugs, vitamins and minerals, and substance abuse, as well as the effects of medications on the various body systems. Lecture (2.00). Prerequisite: MOA-140.

**MOA-201 Diagnostic and Procedural Coding (4.00 cr.)**

This course enables the student to develop competence in coding systems, diagnoses, and procedures for data collection and processing. The student will follow federal regulations and guidelines for sequencing of diagnoses and processing activities. The laboratory component of the course is utilized to develop the skills and competencies to perform coding through both manual and computer-based methods. Lecture (3.00), Laboratory (3.00). Prerequisite: MOA-140.

**MOA-203 Medical Office Assistant Administrative Procedures I (3.00 cr.)**

This course provides a comprehensive medical office simulation. Students are trained in machine transcription and are given basic instruction in word processing operations. Lecture (2.00), Laboratory (2.00). Corequisites: MOA-140 and INF-119.

**MOA-204 Medical Office Assistant Administrative Procedures II (3.00 cr.)**

This course provides advanced training in medical office procedures and management. Special emphasis placed on medical transcription and medical written communications. Lecture (2.00), Laboratory (2.00). Prerequisite: MOA-203.

**MOA-218 Medical Economics (2.00 cr.)**

This course is a study of various types of medical practice and medical care, fee determination, health and accident insurance programs, and government medical care programs. Medical law and ethics are also emphasized. Lecture (2.00). Corequisite: MOA-141.

**MOA-240 Clinical Office Practice (4.00 cr.)**

This course enables the student to develop competence in examination room techniques. Special emphasis is placed on preparing the patient for examination, taking vital signs, preparing for sterilization and injection procedures, taking electrocardiograms, performing first aid and emergency procedures including CPR, and caring for supplies and equipment in the physician's office. Lecture (3.00), Laboratory (3.00). Prerequisites: MAT-032, MAT-035, MOA-140, and MOA-141.

**MOA-241 Clinical Laboratory Technology (4.00 cr.)**

This course enables the student to develop competence in the techniques of laboratory procedure commonly performed in a physician's office. Procedures studied include urinalysis, hematology, bacteriology, immunology, and basal metabolism. Lecture (3.00), Laboratory (3.00). Prerequisite: MOA-240.

**MOA-243 Medical Office Assistant Externship I (1.00 cr.)**

This course provides the student with 120 hours of directed experience in a physician's office or other relevant medical facility. Attendance is required at scheduled seminars. Laboratory (8.00). Prerequisite: MOA-240. Corequisites: MOA-203 and MOA-241.

**MOA-244 Medical Office Assistant Externship II (1.00 cr.)**

This course enables the student to continue with 120 hours of directed experience in an assigned physician's office or other relevant medical facility. Emphasis is on refinement of skills and performance of all administrative and clinical tasks. Attendance is required at scheduled seminars. Laboratory (8.00). Prerequisite: MOA-243.

**MUA – APPLIED MUSIC****MUA-101 Bass I (1.00 cr.)**

This course provides instruction in bass designed to develop the student's level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00).

**MUA-102 Guitar I (1.00 cr.)**

This course provides instruction in guitar designed to develop the students' level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00).

**MUA-103 Percussion I 1.00 cr.)**

This course provides instruction in percussion designed to develop the student's level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00).

**MUA-104 Piano I (1.00 cr.)**

This course provides instruction in piano designed to develop the students' level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00).

**MUA-105 Strings I (1.00 cr.)**

This course provides instruction in string instruments designed to develop the student's level of proficiency. The student attends one lesson per week. Half-hour individual lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00).

**MUA-106 Voice I (1.00 cr.)**

This course provides instruction in voice designed to develop the students' level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00).

**MUA-107 Woodwinds/Brass I (1.00 cr.)**

This course provides instruction in woodwinds and brass designed to develop the student's level of proficiency. The student attends one lesson

per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00).

**MUA-231 Bass II (1.00 cr.)**

This course provides instruction in bass designed to develop the student's level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-101.

**MUA-232 Bass III (1.00 cr.)**

This course provides instruction in bass designed to develop the student's level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-231.

**MUA-233 Bass IV (1.00 cr.)**

This course provides instruction in bass designed to develop the student's level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-232.

**MUA-234 Guitar II (1.00 cr.)**

This course provides instruction in guitar designed to develop the students' level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-102.

**MUA-235 Guitar III (1.00 cr.)**

This course provides instruction in guitar designed to develop the students' level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-234.

**MUA-236 Guitar IV (1.00 cr.)**

This course provides instruction in guitar designed to develop the student's level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-235.

**MUA-237 Percussion II (1.00 cr.)**

This course provides instruction in percussion designed to develop the student's level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-103.

**MUA-238 Percussion III (1.00 cr.)**

This course provides instruction in percussion designed to develop the student's level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-237.

**MUA-239 Percussion IV (1.00 cr.)**

This course provides instruction in percussion designed to develop the student's level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-238.

**MUA-240 Piano II (1.00 cr.)**

This course provides instruction in piano designed to develop the students' level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-104.

**MUA-241 Piano III (1.00 cr.)**

This course provides instruction in piano designed to develop the students' level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-240.

**MUA-242 Piano IV (1.00 cr.)**

This course provides instruction in piano designed to develop the students' level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisites: MUA-241.

**MUA-243 Strings II (1.00 cr.)**

This course provides instruction in string instruments designed to develop the student's level of proficiency. The student attends one lesson per week. Half-hour individual lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-105.

**MUA-244 Strings III (1.00 cr.)**

This course provides instruction in string instruments designed to develop the student's level of proficiency. The student attends one lesson per week. Half-hour individual lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-243.

**MUA-245 Strings IV (1.00 cr.)**

This course provides instruction in string instruments designed to develop the student's level of proficiency. The student attends one lesson per week. Half-hour individual lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-244.

**MUA-246 Voice II (1.00 cr.)**

This course provides instruction in voice designed to develop the students' level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-106.

**MUA-247 Voice III (1.00 cr.)**

This course provides instruction in voice designed to develop the students' level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-246.

**MUA-248 Voice IV (1.00 cr.)**

This course provides instruction in voice designed to develop the students' level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-247.

**MUA-249 Woodwinds/Brass II (1.00 cr.)**

This course provides instruction in woodwinds and brass designed to develop the student's level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-107.

**MUA-250 Woodwinds/Brass III (1.00 cr.)**

This course provides instruction in woodwinds and brass designed to develop the student's level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-249.

**MUA-251 Woodwinds/Brass IV (1.00 cr.)**

This course provides instruction in woodwinds and brass designed to develop the student's level of proficiency. The student attends one lesson per week. Lesson times are arranged during the first week of classes. Lecture (1.00), Laboratory (1.00). Prerequisite: MUA-250.

MUS - MUSIC

**MUS-101 Music Appreciation (3.00 cr.)**

This course is a study of the materials and basic components of music, primary musical forms and major musical styles, and of the development of music from the pre-Baroque period to the present. >General Education Course. Lecture (3.00).

**MUS-103 Fundamentals of Music (3.00 cr.)**

This course is a study of such rudiments of music as notation, the structure of scales, intervals, keys, triads, and simple harmonic progressions. Lecture (3.00).

**MUS-105 History of Jazz in America (3.00 cr.)**

This course is a study of the historical development of jazz from its origin as a form of Black American folk music to its acceptance as a major expression of American art. Lecture (3.00).

**MUS-107 History of Western Music Before 1750 (3.00 cr.)**

This course is a study of the historical and stylistic development of music from the Gothic period through the Baroque period. >General Education Course. Lecture (3.00).

**MUS-108 History of Western Music After 1750 (3.00 cr.)**

This course is a study of the historical and stylistic development of music from the Classical period to the present. >General Education Course. Lecture (3.00).

**MUS-109 History of Musical Theatre (3.00 cr.)**

This course is a chronological survey course that explores musical theatre from its early beginnings to the present. In a lecture and discussion format, students will explore examples of musical theatre to illustrate musical elements, musical and theatrical techniques, and structural form. Selected works will be considered from the context of their relationship with historical and artistic values. >General Education Course. Lecture (3.00).

**MUS-110 Music, Art, and Drama (3.00 cr.)**

This course is designed to promote an understanding and appreciation of the human cultural heritage and concentrates upon major developments in music, art, and drama during the Baroque, Classical, Romantic, and Contemporary periods. >General Education Course. Lecture (3.00).

**MUS-118 Vocal Workshop (2.00 cr.)**

This course is an introduction to the basic principles of vocal production. Application of correct vocal techniques is introduced through a series of group and solo singing activities. Lecture (1.00), Laboratory (2.00).

**MUS-119 Songwriting Workshop (2.00 cr.)**

This course provides students with a solid background in the art and craft of songwriting. Students will study the elements of songwriting: lyrics, rhythm, melody, harmony, and song structure. Students will work on their original compositions through a series of group and solo activities. Lecture (1.00), Laboratory (2.00).

**MUS-120 Pop/Rock Ensemble I (1.00 cr.)**

This course requires students to study and to perform in a variety of popular music styles. Special attention will be given to the development of creative skills and reading pop charts. Students are expected to participate in concerts for college ceremonies and functions. Lecture (1.00), Laboratory (1.00).

**MUS-121 Chorus I (1.00 cr.)**

This course requires students to study and to perform standard and contemporary choral literature for mixed voices and to participate in concerts for college ceremonies and functions. Lecture (1.00), Laboratory (1.00).

**MUS-125 Chamber Ensemble I (1.00 cr.)**

This course requires students to study and to perform standard and contemporary instrumental literature and to participate in concerts for college ceremonies and functions. Lecture (1.00), Laboratory (1.00).

**MUS-131 Class Piano I (2.00 cr.)**

This course is an introductory course designed to provide fundamental piano instruction. Lecture (1.00), Laboratory (2.00).

**MUS-132 Music Theory I (2.00 cr.)**

This course is a study of elementary diatonic harmony. It includes the study of major scales, natural, harmonic, and melodic forms of minor scales. Also included is the study of interval and triad construction, the figured bass, cadences, plus bass and soprano harmonization. (Fall Only)Lecture (1.00), Laboratory (2.00).

**MUS-134 Ear Training and Musicianship I (2.00 cr.)**

This is a basic course designed to develop a comprehension of musical structure and styles through sight singing and musical dictation. Lecture (1.00), Laboratory (2.00).

**MUS-137 Guitar in Classroom (2.00 cr.)**

This course is a systematic approach to basic guitar technique and an introduction to contemporary music. Lecture (2.00).

**MUS-140 Jazz Ensemble I (1.00 cr.)**

This course requires students to study and to perform in a variety of jazz styles. Special attention will be given to the development of improvisational skills and reading jazz charts. Students are expected to participate in concerts for college ceremonies and functions. Lecture (1.00), Laboratory (1.00).

**MUS-150 Introduction to MIDI Sequencing and Synthesis (3.00 cr.)**

This course introduces students to the concepts of composing music and processing sounds using software-based sequencers and synthesizers. Topics covered include MIDI theory; composing with MIDI controllers, sequencing software and virtual instruments; synthesizing and manipulating sounds with synthesizers and audio processing tools; converting MIDI to audio; and mixing multi-track productions. Students will also be exposed to various forms of MIDI-based music as a basis for composing techniques. Lecture (2.00), Laboratory (2.00).

**MUS-151 Introduction to Audio Recording (3.00 cr.)**

This course introduces students to the concepts of recording, mixing, and other audio using computer-based Digital Audio Workstations (DAWs.) Topics covered include digital audio theory, DAW signal flow and system requirements, stereo mixing techniques, and use of software-based audio effects processors such as equalizers, compressors, reverbs, and amp simulators. Students are also introduced to the concepts of MIDI recording using virtual instruments and receive hands-on practice in digital music production in a state-of-the-art production lab. Lecture (2.00), Laboratory (2.00).

**MUS-152 Introduction to Music Business (3.00 cr.)**

This is a course designed to provide students with important skills and knowledge that will enhance their abilities for a career in fields combining music and business. Basic concepts of how the music industry works and how music is created and marketed will be presented along with discussions of numerous career options. Topics discussed will provide an overview of the record, radio, video, film, television, and advertising industries and how each uses music. Lecture (3.00).

**MUS-153 Piano Pedagogy I (3.00 cr.)**

This course studies effective teaching skills for elementary and Intermediate levels of piano instruction, including the investigation of specific solo and developmental piano repertoire and method books. It introduces fundamental business aspects of teaching private piano. Lecture (2.00), Laboratory (2.00). Corequisite: MUS-131.

**MUS-163 Careers in Music (3.00 cr.)**

This course is an introductory survey of career opportunities in the field of music, including music performance and composition, music publishing, sound recording, concert promotion, arts administration, music retail, music education, and music therapy. Students will prepare a portfolio including promotional materials necessary for embarking on a career in the music field. Lecture (3.00).

**MUS-220 Pop/Rock Ensemble II (1.00 cr.)**

This course requires students to study and to perform in a variety of popular music styles. Special attention will be given to the development of creative skills and reading pop charts. Students are expected to participate in concerts for college ceremonies and functions. Lecture (1.00), Laboratory (1.00). Prerequisite: MUS-120.

**MUS-221 Pop/Rock Ensemble III (1.00 cr.)**

This course requires students to study and to perform in a variety of popular music styles. Special attention will be given to the development of creative skills and reading pop charts. Students are expected to participate in concerts for college ceremonies and functions. Lecture (1.00), Laboratory (1.00). Prerequisite: MUS-220.

**MUS-222 Pop/Rock Ensemble IV (1.00 cr.)**

This course requires students to study and to perform in a variety of popular music styles. Special attention will be given to the development of creative skills and reading pop charts. Students are expected to participate in concerts for college ceremonies and functions. Lecture (1.00), Laboratory (1.00). Prerequisite: MUS-221.

**MUS-231 Class Piano II (2.00 cr.)**

This course provides continuing piano instruction for any student who fulfills the prerequisite for the course. The course includes the study of piano literature from the Baroque period to the present and emphasizes the further development of the students' piano technique. Lecture (1.00), Laboratory (2.00). Prerequisite: MUS-131.

**MUS-232 Music Theory II (Spring Only) (2.00 cr.)**

This course is a study of harmonization and harmonic progressions. The course includes the study of six-four chords, non-harmonic tones,

modulation, and the dominant seventh chord. Laboratory (2.00), Lecture (1.00). Prerequisite: MUS-132.

**MUS-234 Ear Training and Musicianship II (2.00 cr.)**

This course is a continuation of Ear Training and Musicianship I focusing on the development of aural comprehension skills through sight-singing and music dictation exercises. Lecture (1.00), Laboratory (2.00). Prerequisite: MUS-134.

**MUS-241 Class Piano III (2.00 cr.)**

This is a course designed to develop skills in sight-reading, transposition, harmonization styles, and improvisation techniques. Included is the study of piano literature from the Baroque to the present. The emphasis is on good pianist technique. Lecture (1.00), Laboratory (2.00). Prerequisite: MUS-231.

**MUS-242 Class Piano IV (2.00 cr.)**

This is a course designed to develop further skills in sight-reading, transposition, harmonization styles, and accompaniment techniques. Included is further study of piano literature from the Baroque to the present. There is continued emphasis on good pianistic technique. Laboratory (2.00), Lecture (1.00). Prerequisite: MUS-241.

**MUS-246 Jazz Ensemble II (1.00 cr.)**

This course requires students to study and to perform in a variety of jazz styles. Special attention will be given to the development of improvisational skills and reading jazz charts. Students are expected to participate in concerts for the college ceremonies and functions. Lecture (1.00), Laboratory (1.00). Prerequisite: MUS-140.

**MUS-247 Jazz Ensemble III (1.00 cr.)**

This course requires students to study and to perform in a variety of jazz styles. Special attention will be given to the development of improvisational skills and reading jazz charts. Students are expected to participate in concerts for the college ceremonies and functions. Lecture (1.00), Laboratory (1.00). Prerequisite: MUS-246.

**MUS-248 Jazz Ensemble IV (1.00 cr.)**

This course requires students to study and to perform in a variety of jazz styles. Special attention will be given to the development of improvisational skills and reading jazz charts. Students are expected to participate in concerts for the college ceremonies and functions. Lecture (1.00), Laboratory (1.00). Prerequisite: MUS-247.

**MUS-250 Electronic Music Composition (3.00 cr.)**

This course introduces students to advanced concepts of creating standalone electronic music compositions as well as compositions for visual media. Topics covered include subtractive, additive, granular, FM and RM synthesis, mosque concrete composition, film/video scoring, and programming. Students will also be exposed to various forms of MIDI-based music as a basis for composing techniques and will use state-of-the-art music software and hardware to create compositions. Lecture (2.00), Laboratory (2.00). Prerequisite: MUS-150.

**MUS-251 Studio Recording Techniques (3.00 cr.)**

This course introduces students to the concepts of recording live instruments and vocals in a state-of-the-art digital recording studio. Students will learn techniques for recording orchestral instruments as well as instruments used in popular music. Topics covered include studio signal flow, microphone selection and placement, use of outboard and software-based effects processors, overdubbing, creating composite audio tracks, and mixing. Students are expected to spend additional time in the studio and/or music technology lab working on assigned projects. Lecture (2.00), Laboratory (2.00). Prerequisite: MUS-151.

**MUS-252 Music in the Marketplace (3.00 cr.)**

This course provides further study of the music industry for students who wish to seek employment in fields combining music and business. This course will provide an in-depth study focusing upon topics including music publishing, national and international copyright law, live performance, managers and agents, music organizations, recording agreements, music publishing, film and television music production, music merchandising, and other contractual obligations. Lecture (3.00). Prerequisite: MUS-152.

**MUS-253 Piano Pedagogy II (3.00 cr.)**

This course continues the study of effective teaching skills for Intermediate to advanced levels of piano instruction, including the investigation of specific solo and developmental repertoire that are standard in the field of piano pedagogy and performance. The course surveys and examines current piano methods, literature and materials. It further delineates aspects of successful business practices for the private and/or non-profit piano studio. Lecture (2.00), Laboratory (2.00). Prerequisite: MUS-153.

**MUS-255 Chorus II (1.00 cr.)**

This course requires students to study and to perform standard and contemporary choral literature for mixed voices and to participate in concerts for college ceremonies and functions. Lecture (1.00), Laboratory (1.00). Prerequisite: MUS-121.

**MUS-256 Chorus III (1.00 cr.)**

This course requires students to study and to perform standard and contemporary choral literature for mixed voices and to participate in concerts for college ceremonies and functions. Lecture (1.00), Laboratory (1.00). Prerequisite: MUS-255.

**MUS-257 Chorus IV (1.00 cr.)**

This course requires students to study and to perform standard and contemporary choral literature for mixed voices and to participate in concerts for college ceremonies and functions. Lecture (1.00), Laboratory (1.00). Prerequisite: MUS-255.

**MUS-258 Chamber Ensemble II (1.00 cr.)**

This course requires students to study and to perform standard and contemporary instrumental literature and to participate in concerts for college ceremonies and functions. Lecture (1.00), Laboratory (1.00). Prerequisite: MUS-125.

**MUS-259 Chamber Ensemble III (1.00 cr.)**

This course requires students to study and to perform standard and contemporary instrumental literature and to participate in concerts for college ceremonies and functions. Lecture (1.00), Laboratory (1.00). Prerequisite: MUS-258.

**MUS-260 Chamber Ensemble IV (1.00 cr.)**

This course requires students to study and to perform standard and contemporary instrumental literature and to participate in concerts for college ceremonies and functions. Lecture (1.00), Laboratory (1.00). Prerequisite: MUS-259.

**MUS-261 Advanced Studio Recording Techniques (3.00 cr.)**

This course is a further study of recording technology as applied to music production. Topics covered include techniques of live multi-track recording and overdubbing, including microphone selection and setup, mixing techniques such as creating automated mixes using software- and hardware-based signal processors, as well as basic mastering techniques for CD, DVD and other consumer formats such as web-based audio and video. Lecture (2.00), Laboratory (2.00). Prerequisite: MUS-251.

**MUS-262 Concert Promotion and Production (3.00 cr.)**

This course is a practical introduction to the structure of the live performance industry. Topics covered include artist relations, talent and venue management, advertising and public relations, licensing, live sound reinforcement, stage and lighting systems, as well as performing arts administration. The student will gain practical experience by participating in the promotion and production of college sponsored events. Lecture (2.00), Laboratory (2.00). Prerequisite: MUS-152.

**MUS-462 Co-Op Work Experience (Music) (2.00 cr.)**

This course is designed to provide the student with hands-on experience in a work environment. It is an opportunity for a student to bridge classroom theory with on-the-job experience under professional guidance in a college approved work environment. Onsite evaluations are done by a faculty member/employer. 120 hours work experience distributed over the semester. Lecture (1.00), Cooperative (8.00). Prerequisite: MUS-252 or MUS-261.

**MUS-463 Co-Op Work Experience (Music) (3.00 cr.)**

This course is designed to provide the student with hands-on experience in a work environment. It is an opportunity for a student to bridge classroom theory with on-the-job experience under professional guidance in a college

approved work environment. Onsite evaluations are done by a faculty member/employer. 180 hours work experience distributed over the semester. Lecture (1.00), Cooperative (12.00). Prerequisite: MUS-252 or MUS-261.

#### **MUS-464 Co-Op Work Experience (Music) (4.00 cr.)**

This course is designed to provide the student with hands-on experience in a work environment. It is an opportunity for a student to bridge classroom theory with on-the-job experience under professional guidance in a college approved work environment. Onsite evaluations are done by a faculty member/employer. 240 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (16.00). Prerequisite: MUS-252 or MUS-261.

### NUR – NURSING

#### **NUR-181 Physical Assessment (1.00 cr.)**

This course is a first-level course in the nursing sequence that focuses on taking a nursing history including a psychosocial assessment and performing a basic systematic head-to-toe physical assessment of adults using selected techniques. At the end of this course, students will be able to perform a beginning level physical assessment. Laboratory (2.00). Corequisites: NUR-182, NUR-183, BIO-109, and PSY-101.

#### **NUR-182 Pharmacology for Nurses (1.00 cr.)**

This course is a first-level course in the nursing sequence, which introduces the student to the drug classification system. Students will learn basic actions and side effects of drugs and drug regulations. Mathematical calculations necessary to the practice of nursing are taught, and students must achieve a passing score on a medication calculations test in order to pass this course. Lecture (1.00). Corequisites: NUR-181, NUR-183, BIO-109, and PSY-101.

#### **NUR-183 Basic Concepts and Skills of Nursing (6.00 cr.)**

This course is a first-level course in the nursing sequence. Concepts developed throughout the program are introduced. Orem's nursing model is presented as the organizing framework of the curriculum. The nursing process is introduced as a problem solving technique. Students will be required to pass performance tests and are expected to practice these skills to perfect techniques. Students will plan and implement nursing care in a variety of health care settings. Lecture (2.00), Laboratory (12.00). Corequisites: NUR-181, NUR-182, BIO-109, and PSY-101.

#### **NUR-281 Adult Health Nursing A (4.00 cr.)**

This course is a second-level course in the nursing sequence that focuses on the health care of individuals and families who have needs related to fluid and electrolytes, oxygenation and circulation. Students will use the nursing process in a variety of health care settings to assist individuals, families and groups achieve optimum health. This course runs for half the semester concurrently with NUR-282. Lecture (4.00), Laboratory (12.00). Prerequisites: NUR-181, NUR-182, NUR-183, BIO-109, and PSY-101. Corequisites: BIO-209, NUR-282, and PSY-106.

#### **NUR-282 Adult Health Nursing B (4.00 cr.)**

This course is a second-level course in the nursing sequence that focuses on the health care of individuals and families who have needs related to nutrition and elimination. Students will use the nursing process in a variety of health care settings to assist individuals and families achieve optimum health. This course runs for half the semester concurrently with NUR-281. Lecture (4.00), Laboratory (12.00). Prerequisites: NUR-181, NUR-182, NUR-183, BIO-109, and PSY-101. Corequisites: BIO-209, NUR-281, and PSY-106.

#### **NUR-284 Maternal-Child Health Nursing (5.00 cr.)**

This course is a third-level course in the nursing sequence that focuses on family units, reproduction, childbearing, and the health care needs of infants, children and adolescents to meet universal self-care requisites. Students will use the nursing process in a variety of health care settings to assist individual families and groups achieve optimum health. Lecture (6.00), Laboratory (12.00). Prerequisites: NUR-281 and NUR-282. Corequisites: BIO-104, SOC-101, and NUR-285.

#### **NUR-285 Mental Health Nursing (4.00 cr.)**

This course is a third-level course in the nursing sequence that focuses on adaptive and maladaptive psychosocial behaviors. Concentration is on the interpersonal and intrapersonal relationships for infants, children,

adolescents and adults. Students will use the nursing process in a variety of health care settings to assist individuals and families achieve optimum health. Lecture (4.00), Laboratory (12.00). Prerequisites: NUR-281 and NUR-282. Corequisites: BIO-104, SOC-101, and NUR-284.

#### **NUR-290 Adult Health Nursing C (4.00 cr.)**

This course is a fourth-level course in the nursing sequence that focuses on the health care of individuals, families and groups who have self-care deficits related to mobility and neurosensory problems. Students will use the nursing process in a variety of health care settings to assist individuals, families and groups achieve optimum health. Professional Role Management content will be integrated within this course during clinical conference time. Students will examine principles and skills inherent in advanced nursing practice, case management, health care economics and leadership. Critical thinking exercises, patient care scenarios, role-play and discussion will be utilized. Lecture (4.00), Laboratory (12.00). Prerequisites: NUR-284 and NUR-285. Corequisite: NUR-291.

#### **NUR-291 Adult Health Nursing D (4.00 cr.)**

This course is a fourth-level course in the nursing sequence which focuses on the health care of individuals and families who have self-care deficits related to cellular regulation, sexual practices and endocrine and immune function. Students will use the nursing process in a variety of health care settings to assist individuals, families and groups achieve optimum health. Professional Role Management content will be integrated within this course during clinical conference time. Students will examine principles and skills inherent in advanced nursing practice, case management, health care economics and leadership. Critical thinking exercises, patient care scenarios, role-play, and discussion will be utilized. Lecture (2.00), Laboratory (15.00). Prerequisites: NUR-284 and NUR-285. Corequisite: NUR-290.

### PHR – PHILOSOPHY & RELIGION

#### **PHR-100 Reasoning (3.00 cr.)**

This course is an introduction to the theory and practice of critical thinking. Topics covered may include the qualities and attitudes of the critical thinker; the nature and importance of rationality; the weighing of evidence and the rationality of belief; common errors in reasoning (e.g., fallacies); the evaluation of concepts and definitions; the analysis and evaluation of arguments in ordinary language; argument diagramming; and reasoning about causes and probability. >General Education Course. Lecture (3.00).

#### **PHR-101 Introduction to Philosophy (3.00 cr.)**

This course is a study of the basic problems and methods of philosophical inquiry, concentrating on the work of such major thinkers as Plato, Aristotle, Augustine, Aquinas, Descartes, Hume, Kant, Hegel, Marx, Kierkegaard, and Sartre. Topics of discussion include the nature and limits of human knowledge, the existence of God, the differences between right and wrong conduct, the nature of the good life, and the meaning and value of human existence. >General Education Course. Lecture (3.00).

#### **PHR-102 Contemporary Moral Issues (3.00 cr.)**

This course is an introduction to applied or practical ethics. This involves discussions of specific moral problems, issues, controversies, and questions. Topics may include abortion; euthanasia; the death penalty and other punishments; sexual morality; pornography and censorship; discrimination on the basis of race, gender, or sexual orientation; drugs; environmental ethics; the moral status of animals; and the meaning of virtue and vice. >General Education Course. Lecture (3.00).

#### **PHR-103 Basic Logic (3.00 cr.)**

This course is an introduction to the principles and methods of correct reasoning. Topics of discussion include the relationship between logic and language; the distinction between formal and informal logic; the detection and avoidance of formal and informal fallacies; the formulation and evaluation of deductive arguments; the differences between traditional and modern (symbolic) logic; and the nature, scope, and limits of inductive reasoning. >General Education Course. Lecture (3.00).

#### **PHR-104 Topics in Philosophy (3.00 cr.)**

This course is an introductory study of major themes in both traditional and modern philosophical literature, concentrating on such topics as the human condition; the scope and limits of human freedom; the human experience of death; the nature of truth, beauty, and goodness; the relationship between

liberty, equality, and justice; and the human search for the meaning of life. Lecture (3.00).

**PHR-105 Professional Ethics (3.00 cr.)**

This course is an Introductory study of major philosophical and moral issues, problems, and questions arising within the healthcare, legal, and business professions. General topics of discussion may include what counts as a profession; professional codes of conduct; the professional-client relationship; the professional-employer relationship; privacy and confidentiality; informed consent; character, regulation, and training; and collective responsibility. Lecture (3.00).

**PHR-106 Eastern Philosophy (3.00 cr.)**

This course is an introduction to the major philosophical traditions of China and India, concentrating on the work of such major thinkers as Lao Tzu, Confucius, Nagarjuna, Vasubandhu, Shankara, and Ramanuja. Topics of discussion include the nature, problems, and methods of Eastern philosophy; the nature of ultimate reality; the nature of the self; the nature and existence of God; the nature and limits of human knowledge; human nature and the human condition; the meaning and value of life and death; the nature of the good life; and the search for enlightenment. >General Education Course. >Diversity Course. Lecture (3.00).

**PHR-107 Introduction to the Philosophy of Art (3.00 cr.)**

This course is a study of the basic problems, issues, and questions with respect to the understanding, interpretation, and evaluation of art and beauty. Readings may include philosophers such as Plato, Aristotle, Hume, Kant, Nietzsche, Beardsley, and representation in the arts; environmental aesthetics; the connections between art and ethics and politics; and the nature of aesthetic value. >General Education Course. Lecture (3.00).

**PHR-110 Introduction Ethical Theory (3.00 cr.)**

This course is a study of the basic theories, methods, and problems of ethics. Topics may include the study of the moral theories of Aristotle, Aquinas, Hobbes, Kant, Mill, and Rawls; the nature and meaning of moral terms; moral absolutism and relativism; the nature of moral reasoning; conceptions of the good life; free will, determinism, and moral responsibility. >General Education Course. Lecture (3.00).

**PHR-111 Social and Political Philosophy (3.00 cr.)**

This course is a general introduction to the broad themes of political philosophy and social theory. Discussions will include how human life is and should be organized into societies; the nature of political systems and different forms of government; the relationship between the individual and the state; the nature of justice; the influence of economy on society; how human nature influences social nature; and the meaning of freedom and democracy. >General Education Course. Lecture (3.00).

**PHR-120 Introduction to Religion (3.00 cr.)**

This course is a study of major themes in religious and theological thought. Topics of discussion include the nature and existence of God; the relationship between God, humanity, and the universe; human nature and the human condition; religious responses to the problems of human existence; and the relationship between religion and society. >General Education Course. Lecture (3.00).

**PHR-121 Religions of the World (3.00 cr.)**

This course is a comparative study of the history, basic beliefs, and characteristic practices of such major religious systems as Hinduism, Buddhism, Taoism, Confucianism, Judaism, Christianity, and Islam. Some attention is also given to the religions of ancient Middle Eastern and Mediterranean peoples, to ancient and modern tribal religions, and to contemporary sectarian and cultic movements. >General Education Course. >Diversity Course. Lecture (3.00).

**PHR-122 Women and Religion (3.00 cr.)**

This course analyzes the relationship of women to the major religious traditions of the world, including Judaism, Christianity, Islam, Hinduism, Buddhism, and others. The course examines such issues as religious statements about the nature of women, religious codes of behavior for women, and the extent and nature of women's religious participation within the various traditions. >Diversity Course. Lecture (3.00).

**PHR-124 The Christian Scriptures (3.00 cr.)**

This course is an Introductory study of traditional and modern perspectives on the Old and New Testaments, with primary emphasis on the New Testament. >Diversity Course. Lecture (3.00).

**PHR-125 The Hebrew Scriptures (3.00 cr.)**

This course is an Introductory study of traditional and modern perspectives on the Hebrew Bible. The relationship between the Bible and the Talmud will also be discussed. >Diversity Course. Lecture (3.00).

**PHR-126 The Islamic Scriptures (3.00 cr.)**

This course is an Introductory study of the origins, content, and meaning of the primary sacred text of Islam, the Koran (Qur'an). The relationship between the Koran and the Hadith (a record of sayings and actions of Muhammad) will also be discussed. >Diversity Course. Lecture (3.00).

**PHR-203 Intermediate Logic (3.00 cr.)**

This course is a second-level course in logic for those students who are interested in studying advanced systems of logic and their philosophical foundations. Topics covered include the nature of formal deductive systems; sentential logic (advanced problems and methods); predicate logic and quantification theory; and issues in the philosophy of logic. Lecture (3.00). Prerequisite: PHR-103 or MAT-130.

**PHY – PHYSICAL SCIENCES**

**PHY-100 Energy and Society (4.00 cr.)**

This course provides an overview of the nature of energy, its uses, and its effect on the individual, society and the environment. The course will explore the use of energy in contemporary society and the development of renewable energy technologies. Emphasis is placed on conservation, energy efficiency, renewable energy sources and technologies that can be utilized to create a sustainable energy society. The laboratory part of the course will involve service learning projects. >General Education Course. Lecture (3.00), Laboratory (3.00). Prerequisite: MAT-011. Corequisite: MAT-011.

**PHY-111 Astronomy (4.00 cr.)**

This course is a survey of the universe. Light, astronomical instruments and the historical development of Astronomy are topics to be studied to initiate a tour of the heavens, which include the Earth as a planet, the Moon, the Solar System, stars, galaxies, quasars, black holes, and scientific theories of the creation of the universe. The possibility of life elsewhere is discussed throughout. Labs supplement the course material and include an evening at our observatory. >General Education Course. Lecture (3.00), Laboratory (3.00).

**PHY-112 Climatology (4.00 cr.)**

This course is a study of the Earth's climate. Climate elements and atmospheric heat transfer processes will be studied and applied to climate classification schemes. The effects of climate on human activities will be considered. Special attention will be given to the greenhouse effect, El Nino, Ice Age theories, climate explanations for the extinction of the dinosaurs, and past and future climates. Laboratory work features simple analytical and statistical analysis of climate data. >General Education Course. Lecture (3.00), Laboratory (3.00).

**PHY-113 Geology (4.00 cr.)**

This course is a study of the solid Earth. Topics include minerals and rocks, weathering and soils, groundwater, glaciers, deserts, earthquakes, and volcanism. Special attention will be given to mining and oil prospecting and their environmental effects, fossils and rocks, plate tectonics, analysis of the structure of the Earth's interior, and geologic time and Earth history. Laboratory work includes mineral and rock analysis, soil and vegetation studies, topographic mapping, and review of the geologic calendar. >General Education Course. Lecture (3.00), Laboratory (3.00).

**PHY-114 Meteorology (4.00 cr.)**

This course studies the physics of weather. All concepts are taught from their appropriate Physics principles. Our atmosphere's composition is studied along with those heat transfer mechanisms that lead to its thermal structure. Weather elements - temperature, humidity, clouds, pressure, winds, and precipitation - and their physical interactions are analyzed. The equations of motion are applied to the dynamics of hurricanes, cyclones,

and anticyclones. Labs emphasize the Physics of sun-weather relationships, weather maps, and forecasting. >General Education Course. Lecture (3.00), Laboratory (3.00).

**PHY-185 Introduction to Physics (4.00 cr.)**

This course covers a series of topics selected from the following: Newton's Laws of Motion, mechanical energy, work and power, heat and heat transfer, electricity and magnetism, light, sound, atomic structure, and radioactivity and relativity. Conceptual principles are emphasized without dwelling on the rigorous mathematical aspects of the topics studied. Application of principles to environmental and health problems is included. >General Education Course. Lecture (3.00), Laboratory (3.00).

**PHY-186 General Physics I (Fall Only) (4.00 cr.)**

This course is the first half of a two-semester, algebra-based physics sequence, and is a study of mechanics (motion, forces, and the conservation laws), waves, sound, and fluids. It covers kinematics, dynamics, energy, momentum, rotation, and the mechanical properties of matter. The laws of physics are investigated and applied to problem solving. >General Education Course. Lecture (3.00), Laboratory (3.00). Prerequisite: MAT-160; minimum grade C.

**PHY-280 Physics I (4.00 cr.)**

This course is the first semester of a three-semester, calculus-based physics sequence, and is a study of mechanics (motion, forces, and the conservation laws). It covers kinematics, dynamics, statics, energy, momentum, oscillations, gravity, and the properties of solid matter. The laws of physics are investigated and applied to problem solving. >General Education Course. Lecture (3.00), Laboratory (3.00). Prerequisite: MAT-180; minimum grade C. Corequisite: MAT-280.

**PHY-286 General Physics II (Spring Only) (4.00 cr.)**

This course is the continuation of PHY-186 General Physics I, and is a study of heat, electricity and magnetism, light, and modern physics. It covers thermodynamics, electrostatics, magnetic fields and forces, capacitance and inductance, electrical and electronic circuits, geometrical and physical optics, relativity, and quantum theory. >General Education Course. Lecture (3.00), Laboratory (3.00). Prerequisite: PHY-186; minimum grade C.

**PHY-290 Physics II (4.00 cr.)**

This course is the continuation of PHY-280 Physics I, and is primarily a study of electricity and magnetism. It covers electrostatics, electrical circuits, magnetic fields and forces, capacitance and inductance, Maxwell's equations, and the properties of fluids. >General Education Course. Lecture (3.00), Laboratory (3.00). Prerequisites: MAT-280, PHY-280; minimum grade C. Corequisite: MAT-281.

**PHY-291 Physics III (Fall Only) (4.00 cr.)**

This course is the continuation of PHY-290 Physics II, and is a study of waves, heat, and modern physics. It covers sound and light, geometrical and physical optics, thermodynamics, relativity, and quantum theory. >General Education Course. Lecture (3.00), Laboratory (3.00). Prerequisites: MAT-281 and PHY-290; minimum grade C.

**PHY-294 Engineering Mechanics (Spring Only) (4.00 cr.)**

This course is a study of the state of rest or motion of bodies under the action of forces. This course builds a foundation of analytic capability for the solution of a great variety of engineering problems. Topics covered include the statics and dynamics of particles and rigid bodies. Lecture (4.00). Prerequisites: MAT-282 and PHY-280; minimum grade C.

**POL – POLITICAL SCIENCE**

**POL-101 American Government (3.00 cr.)**

This course is the study of the American national political system and the uses, options, patterns, and limitations of public power. The course examines the theoretical roots of government, the American adaptation of the Western political tradition, the Constitution, decision making structures, the role of the people in government, political parties, and civil rights. Current political problems are analyzed and discussed. >General Education Course. Lecture (3.00).

**POL-102 International Relations (3.00 cr.)**

This course is an examination of the basic elements and processes of the modern nation-state system. Political power, nationalism, diplomacy,

international law, international organizations, balance-of-power strategies, imperialism, regionalism, polycentrism, and current world issues are analyzed. >General Education Course. Lecture (3.00).

**POL-103 Political Ideology (3.00 cr.)**

This course focuses on the ideologies that have dominated contemporary world politics. Such theories as Socialism, Communism, Fascism, and Democracy are studied. >General Education Course. Lecture (3.00).

**POL-104 State and Local Government(3.00 cr.)**

This course is the study of state, county, and municipal political systems. The course examines the making and enforcement of public policy and the political roles of the people, political parties, political machines, and pressure groups. Intergovernmental relations and evolving patterns of metropolitan government are analyzed with an emphasis on New Jersey and Bergen County. >General Education Course. Lecture (3.00).

**POL-106 Themes in U.S. History (Modern American Presidency) (3.00 cr.)**

This course is an analytical and historical examination of the development of the office and powers of the modern American presidency. Emphasis is placed on studying the roles of the president as described in the Constitution, the relationship of the executive with the other branches of government, presidential views of the office, the presidential election system, and presidential character and personality. Lecture (3.00).

**POL-107 Introduction to Politics (3.00 cr.)**

This course is a survey of the basic concepts and methodologies of political science. Topics considered include power, comparative and international politics, the state, government, forms of representation, and methods of social science analysis. >General Education Course. Lecture (3.00).

**POL-116 Labor Law (3.00 cr.)**

This course is a study of the laws that govern labor unions and of labor-management relations, union organizing, collective bargaining, contract enforcement, job security and opportunities, working conditions, union members' rights, and labor-management disputes. Emphasis is placed on understanding the National Labor Relations Act and its amendments, the National Labor Relations Board, and Supreme Court decisions relevant to labor law. Extensive use of case studies is made. Lecture (3.00).

**POL-122 Collective Bargain (3.00 cr.)**

This course is an introduction to the theory and practice of collective bargaining, including the legal basis, the goals, the structure, and the content of labor management contracts, grievance and arbitration, the responsibilities and obligations of the parties to collective bargaining, and the costs, strategies, and other considerations involved in reaching collective bargaining agreement. The emphasis in the course is on the private sector, and it introduces the student to actual contract negotiations and enforcement. Lecture (3.00).

**POL-461 Co-Op Work Experience (Political Science) (1.00 cr.)**

This course provides a student with practical, supervised work experience in the area of political science. This program is under professional guidance in a college approved work environment. Job placement assistance is available through the Cooperative Education Office. Lecture (1.00), Cooperative (3.00). Prerequisites: take 2 courses from POL.

**POL-462 Co-Op Work Experience (Political Science) (2.00 cr.)**

This course provides a student with practical, supervised work experience in the area of political science. This program is under professional guidance in a college approved work environment. Job placement assistance is available through the Cooperative Education Office. Lecture (1.00), Cooperative (8.00). Prerequisite: take 1 course from POL.

**POL-463 Co-Op Work Experience (Political Science).(3.00 cr.)**

This course provides a student with practical, supervised work experience in the area of political science. This program is under professional guidance in a college approved work environment. Job placement assistance is available through the Cooperative Education Office. Lecture (1.00), Cooperative (12.00). Prerequisites: take 2 courses from POL.

## PSY - PSYCHOLOGY

**PSY-101 General Psychology (3.00 cr.)**

This course is an analysis of human behavior with special reference to thinking, learning, memory, perception, emotion, individual differences in intelligence, psychotherapy, and personality. The scientific nature and practical relevance of psychological investigations and research findings are discussed. >General Education Course. Lecture (3.00).

**PSY-102 Introduction to Abnormal Psychology (3.00 cr.)**

This course is an examination of psychological adjustment and of the prevention and treatment of psychological disorders. The course focuses on the framework established by the Diagnostic and Statistical Manual of Mental Disorders. Topics of discussion include community mental health problems, stress and coping mechanisms, anxiety disorders, sexual variations and dysfunction, and the more severe disorders such as schizophrenia. Lecture (3.00).

**PSY-103 Educational Psychology (3.00 cr.)**

This course introduces the student to psychology as applied to the teaching-learning process. Topics of discussion include the varieties of human learning, the physical, social, and cognitive development of the learner, the teacher's use of the environment to influence learning, the teacher's role in education, and education self-direction. Lecture (3.00).

**PSY-104 Psychology of Human Relations (3.00 cr.)**

This course is designed to encourage the active participation of each student in a series of activities and lectures that promote increased self-awareness and self-concept. Source materials in the psychology of human relations, communications, group behavior, adjustment, and leadership are studied and discussed. Lecture (3.00).

**PSY-106 Developmental Psychology (3.00 cr.)**

This course is a survey course that provides an overview of the psychological development of the individual through the lifespan. The changes during the childhood, adolescent, adult and elderly periods are studied via theories applied to the whole human lifecycle. Theories about psychosocial, moral, and language development as well as the effect of work, gender, intelligence, personality, health, and other factors on human development are examined. >General Education Course. Lecture (3.00).

**PSY-110 Psychology of Sexuality (3.00 cr.)**

This course emphasizes the changing concepts in human sexuality. Of importance are socialization, deviance, treatment, and psychotherapy in the field of sexuality. Of major interest are the paraphilia, victimization, homosexuality, gender identity, and the psychodynamics involved in sexual expression. >Diversity Course. Lecture (3.00).

**PSY-111 Sport Psychology (3.00 cr.)**

This course is an introduction to sport psychological theory, research, and application. Sport Psychology examines how psychological factors affect an individual's physical performance, and how participation in sport and exercise enhances psychological health and personal well-being. The topics covered include personality; motivation; arousal and anxiety; group cohesion and leadership; effective communication; imagery and skills training; and psychological reactions to athletic injuries. Lecture (3.00).

**PSY-121 Comparative Psychology (3.00 cr.)**

This course uses Bergen County as an environmental laboratory. Birds are studied in their natural habitat and used as a barometer of the changes that have developed in our immediate psychological environment. Behavioral comparisons are made between human and animal behavior. Such topics as the quality of life experience, psychophysiology, group or single living disturbances, sexual behavior, territoriality and self-preservation are discussed. Lecture (3.00).

**PSY-127 Stress Management (3.00 cr.)**

This course is a study of stressful tension and of its psychological and physiological management. Students practice several techniques of coping with stress including problem solving, relaxation techniques, biofeedback, exercise, and work strategies. Personal stress management approaches are emphasized. Lecture (3.00).

**PSY-201 Child Psychology (3.00 cr.)**

This course is designed to help the student understand the significant stages of motor, cognitive, linguistic, emotional, and social development of

the child as these are influenced by genetic, cultural, and individual forces from the prenatal period through middle childhood. >General Education Course. Lecture (3.00). Prerequisite: PSY-101.

**PSY-207 Psychology of Women (3.00 cr.)**

This course is an in-depth examination of the psychology of women. The course analyzes the interplay of biological and cultural factors as they affect gender roles. 'Typical' female behaviors are examined and assessed in terms of these factors in an attempt to understand the bases of social similarities as well as differences. >Diversity Course. Lecture (3.00). Prerequisite: PSY-101.

**PSY-210 Social Psychology (3.00 cr.)**

This course is an introduction to social psychological theory, research, and application. It examines how people perceive, influence, and relate to others. It also investigates the diverse cultural contexts that shape social interactions. The topics covered will include social perception, attitude formation and change, persuasion and social influence, cultural norms, interpersonal attraction, prejudice and stereotyping, group interaction, aggression, and helping behavior. >Diversity Course. Lecture (3.00). Prerequisite: PSY-101.

**PSY-461 Co-Op Work Experience (Psychology) (1.00 cr.)**

This course provides the student with the opportunity to gain human relations work experience in social institutions that relate to his/her career goals. The program is under professional guidance in a college approved work environment. Students are supervised by a faculty member, and job placement assistance is available through the Co-Op office. Lecture (1.00), Cooperative (3.00). Prerequisite: PSY-101.

**PSY-462 Co-Op Work Experience (Psychology) (2.00 cr.)**

This course provides the student with the opportunity to gain human relations work experience in social institutions that relate to his/her career goals. The program is under professional guidance in a college approved work environment. Students are supervised by a faculty member, and job placement assistance is available through the Co-Op office. Lecture (1.00), Cooperative (8.00). Prerequisite: PSY-101.

**PSY-463 Co-Op Work Experience (Psychology) (3.00 cr.)**

This course provides the student with the opportunity to gain human relations work experience in social institutions that relate to his/her career goals. The program is under professional guidance in a college approved work environment. Students are supervised by a faculty member, and job placement assistance is available through the Co-Op office. Lecture (1.00), Cooperative (12.00). Prerequisite: PSY-101.

## RAD - RADIOGRAPHY

**RAD-180 Introduction to Radiography (3.00 cr.)**

In this course, the healthcare system and the radiography profession are studied. Specific topics related to patient care management include communication, medical law, ethical practice, vital signs, basic pharmacology, infection control, transfer techniques, medical equipment and emergencies are addressed. Lecture (3.00). Prerequisite- admission to the program. Corequisites: RAD-181 and RAD-182.

**RAD-181 Radiography I (5.00 cr.)**

This course introduces the study of radiography. The theory and application of positioning of the chest, abdomen, and upper limb will be explored. Basic principles of radiation protection and radiographic exposure and medical terminology will be reinforced in class and in the laboratory. Lecture (3.00), Laboratory (6.00). Prerequisite- admission to the program. Corequisites: RAD-180, RAD-182, and BIO-109.

**RAD-182 Radiography Clinical I (1.00 cr.)**

This course is designed to introduce the student to the physical layout and operation of a department of radiology. This course requires the performance of some routine examinations under the direct supervision of a registered radiographer and a college clinical instructor. The student rotates throughout three affiliated hospitals during this experience. Laboratory (8.00). Corequisites: RAD-180 and RAD-181.

**RAD-183 Radiographic Pathology (2.00 cr.)**

This course is a survey of medical and surgical diseases designed to acquaint the student with changes caused by diseases, which have a relation to the scope of medical and imaging diagnostics. Lecture (2.00).

Prerequisites: BIO-209, RAD-283. Corequisites: RAD-184, RAD-285, and RAD-286.

**RAD-184 Advanced Imaging Equipment and Patient Care (3.00 cr.)**

This course focuses on advanced diagnostic imaging systems and equipment, quality management, and patient care practices. Topics of this course include advanced principles of pharmacology, venipuncture, contrast media, and complications. This is an exploration of all imaging equipment and quality management practices. Lecture (3.00). Prerequisites: RAD-180, RAD-276. Corequisites: RAD-183, RAD-285, and RAD-286.

**RAD-250 Cross-Sectional Anatomy for Specialty Imaging (4.00 cr.)**

This course involves the study of the structure and function of human anatomy in the cross-sectional mode. Among the topics included are abdomen, thoracic, neck and cranial imaging. The course content will be presented through lectures, discussion and laboratory exercises. Anatomy identification plates and a workbook will be utilized in this course. Lecture (3.00), Laboratory (3.00).

**RAD-251 Computer Tomography (3.00 cr.)**

This course presents the concepts, content and technology of CT imaging. Topics to be presented include patient care, principles of operation; image processing and display, system components; image procedures and image quality. Clinical application related to neurological, cardiac, abdominal and musculoskeletal imaging will be discussed. This course meets eligibility requirements for the specialty certification examination in Computerized Tomography. Lecture (3.00).

**RAD-252 Magnetic Resonance Imaging (3.00 cr.)**

This course begins with the very basic including the physical principles, artifacts, image contrast; image quality, clinical application and safety issues. The student will then move into the more intricate physical principles of MRI, including rapid imaging, fast spin echo, K-space, contrast agents as well as the principles and clinical applications of MRA and spectroscopy. In addition, imaging concerns such as positioning tips, compensation for artifacts, dynamic and functional imaging and interventional procedures will be discussed. This course meets eligibility requirements for the specialty certification in Magnetic Resonance Imaging. Lecture (3.00).

**RAD-253 Magnetic Resonance Imaging Clinical Practicum (1.00 cr.)**

This course is a 75-hour clinical experience in a neighboring hospital or specialty-imaging center. The student will perform routine MRI examinations on patients under direct supervision of a specialty technologist. Clinical records will be maintained and monitored by faculty. Laboratory (75.00). Prerequisite: RAD-252.

**RAD-254 Composition Tomography Clinical Practicum (1.00 cr.)**

This course is a 75-hour clinical experience in a neighboring hospital or specialty-imaging center. The student will perform routine CT examinations on patients under direct supervision of a specialty technologist. Clinical records will be maintained and monitored by faculty. Laboratory (75.00). Prerequisite: RAD-251.

**RAD-275 Special Imaging Equipment and Therapeutic and Imaging Modalities (1.00 cr.)**

This course offers students an exploration of advanced imaging techniques and related imaging sub specialties. This course also offers legal and ethical issues as they pertain to radiography. Lecture (1.00). Prerequisites: RAD-184, RAD-285, and RAD-286. Corequisites: RAD-288 and RAD-289.

**RAD-276 Principles of Imaging Equipment (3.00 cr.)**

The overall focus of this course is to orient the student radiographer to the fundamental principles, operation, and application of radiation-producing imaging equipment used in diagnostic imaging. Topics in this course include atomic structure, radiation, diagnostic x-ray circuit, tomography, image intensification, mobile and automatic exposure control units. Radiation safety and patient care principles are reinforced. Lecture (3.00). Prerequisites: RAD-180, RAD-181, and RAD-182. Corequisites: RAD-281 and RAD-282.

**RAD-280 Image Production and Evaluation (3.00 cr.)**

This course involves the study of the theoretical and practical aspects of image creation. The photographic, geometric, and imaging systems will be explored. Evaluation of changes caused in the radiographic image with equipment and recording systems, demonstrated, and discussed. Also

included in this course are the basic concepts of the origin and effects of ionizing radiation on the patient and radiographic image. Lecture (3.00). Prerequisites: RAD-181, RAD-182, and RAD-276. Corequisite: RAD-283.

**RAD-281 Radiography II (4.00 cr.)**

This course is the continuation in the study of radiographic procedures. The theory and application of positioning of the lower limb, spinal column, and an introduction to the contrast studies will be explored. Principles of positioning techniques, exposure, and critique will be explored in the laboratory. Lecture (3.00), Laboratory (3.00). Prerequisites: RAD-180, RAD-181, and RAD-182. Corequisites: RAD-276, RAD-282, and BIO-209.

**RAD-282 Radiography Clinical II (1.00 cr.)**

This course requires students to spend two clinical days a week in a radiology department where students will perform routine as well as some complex examinations under the direct supervision of a registered radiographer and a college clinical instructor. Procedures performed are evaluated based on a competency-based clinical education system. Laboratory (16.00). Prerequisite: RAD-182.

**RAD-283 Intermediate Radiography Clinical (2.00 cr.)**

This course requires students to spend two clinical days a week in a radiology department where students will perform routine as well as some complex examinations under the direct supervision of a registered radiographer and a college clinical instructor. Procedures performed are evaluated based on a competency-based clinical education system. Laboratory (32.00). Prerequisites: RAD-281 and RAD-282.

**RAD-285 Radiography III (4.00 cr.)**

This course continues with the study of radiographic procedures, theory, and application of basic skull, advanced skull, an overview of the management and care of trauma, geriatric and pediatric patients. It also includes a study of contrast agents typically utilized and their respective radiographic examinations. This course includes a component of faculty guided independent study of medical terminology. Lecture (3.00), Laboratory (3.00). Prerequisites: RAD-281 and RAD-283. Corequisites: RAD-183, RAD-184, and RAD-286.

**RAD-286 Radiography Clinical III (1.00 cr.)**

This course requires the performance of routine, complex, and advanced X-ray procedures under the supervision of a registered radiographer and college clinical instructor in a Radiology Department. Students spend 16 hours a week for 15 weeks meeting the established requirements for competency based clinical education. Laboratory (16.00). Prerequisites: RAD-282 and RAD-283.

**RAD-288 Radiography IV (4.00 cr.)**

This course incorporates three major areas of study - radiation protection, computed tomography, and sectional anatomy. There will be an introduction to sectional anatomy. The use of computer software programs will also be used in the laboratory. Lecture (3.00), Laboratory (3.00). Prerequisites: RAD-275, and RAD-289. Corequisites: RAD-285, RAD-286, RAD-183, and RAD-184.

**RAD-289 Radiography Clinical IV (2.00 cr.)**

This course requires the performance of routine, complex, and advanced X-ray procedures under the supervision of a registered radiographer and a college clinical instructor in a radiology department. Students spend 24 hours per week for 15 weeks meeting the established requirements for competency based clinical education. Rotations into specialty areas and elective rotations are also begun. Laboratory (24.00). Prerequisites: RAD-276, RAD-285, RAD-286.

**RAD-290 Senior Student Seminar (3.00 cr.)**

This seminar course involves the performance of routine, complex and advanced radiographic procedures under the supervision of a registered radiographer and college instructor in the radiography department. The students will spend twelve (12) weeks meeting the established requirements for a competency-based clinical education. The specialty elective rotations will continue. Upon completion of all required radiography core and clinical competency based requirements, the students are eligible to apply to the ARRT for the radiography certification examination. Laboratory (32.00). Prerequisites: RAD-182, RAD-276, RAD-282, RAD-283, RAD-286, and RAD-289.

**REA – REAL ESTATE****REA-101 Principles of Real Estate I (3.00 cr.)**

This course is an introduction to real estate law. Topics covered include property rights, title concepts, liens, contracts, mortgages, deeds, and other property instruments. Students must complete this course and REA-201 in same or consecutive semesters to qualify for the New Jersey Real Estate Salesperson's Examination that must be taken within 1 year after completion of REA-201. Lecture (3.00).

**REA-102 Acquisition and Financing of Real Estate (3.00 cr.)**

This course will include property rights, title concepts, liens, contracts, mortgages, deeds, and other property concepts. This course should not be taken by Real Estate Sales Licensees or Paralegal Students. Lecture (3.00).

**REA-201 Principles of Real Estate II (3.00 cr.)**

This course is a structured review of real estate law with emphasis on leases, landlord-tenant relations, appraisals, the law of agency, the License Act and Regulations, and other state and municipal laws and regulations. Students must complete this course and REA-101 in same or consecutive semesters to qualify as a candidate for the New Jersey Real Estate Salesperson's Examination that must be taken within 1 year after completion of this course. Lecture (3.00). Prerequisite: REA-101.

**REA-202 Zoning, Planning, and Land Use (3.00 cr.)**

This course is a study of Land Use Law as set forth in New Jersey Statutes and Case Law with emphasis on the law, practice and procedures before Municipal Zoning and Planning Boards. Lecture (3.00). Prerequisites: BUS-101 and REA-101.

**REA-203 N.J. Environmental Regulations (3.00 cr.)**

This course is a study of Environmental Regulations in New Jersey and their impact on development, expansion of existing structures, and infrastructure serving municipal land use. Existing statutes, administrative regulations, and recent news articles will be reviewed. Students will be required to submit a research paper involving an assigned problem. Lecture (3.00). Prerequisites: BUS-101 and REA-101.

**REA-204 Real Estate Leasing (2.00 cr.)**

This course is a study of New Jersey commercial and residential leasing, civil rights leasing laws, condominiums and cooperatives. Lecture (2.00). Prerequisites: BUS-101 and REA-101.

**REA-205 Real Estate Financing (1.00 cr.)**

This course is a study of Real Estate Finance including introduction to appraisal, mortgage calculations, and investment analysis. Lecture (1.00). Prerequisites: BUS-101 and REA-101.

**RSP – RESPIRATORY THERAPY****RSP-119 Introduction to Respiratory Therapy (4.00 cr.)**

This course provides the student with an in-depth understanding of medical gas administration, humidity and aerosol therapy, safety systems, and infection control. Students will learn the application of mechanical devices utilized to maintain patient airways and emergency cardiopulmonary resuscitation. The gas laws, physiology, and medical equipment terminology is taught. The laboratory exercises provide students with an opportunity to develop their skills in oxygen administration, CPR, and airway management. Lecture (3.00), Laboratory (3.00).

**RSP-121 Respiratory Clinical Externship I (2.00 cr.)**

This course introduces the student to the hospital environment. The student studies the relationship of the respiratory therapy department with other medical departments in the hospital. The student learns charting, patient rounds, equipment, and medical ethics during this rotation. Laboratory (16.00).

**RSP-122 Clinical Medicine (3.00 cr.)**

This course offers the student an opportunity to study the various disease entities and their effect on the cardiopulmonary system. The pathophysiology, diagnosis, and treatment of pulmonary disease are presented in this course. Lecture (3.00).

**RSP-200 Pharmacology for Respiratory Therapists (2.00 cr.)**

This course introduces the student to the medications utilized in the treatment of patients with acute and chronic cardiopulmonary disorders. Lecture (2.00). Corequisites: RSP-119 and RSP-121.

**RSP-222 Cardio-Pulmonary Anatomy and Physiology (4.00 cr.)**

This course places special emphasis on the structure and function of the respiratory and circulatory systems. The laboratory segment of the course consists of demonstrations of these two systems and the application of medical physiological techniques. Lecture (3.00), Laboratory (3.00). Prerequisite: BIO-109. Corequisite: BIO-209.

**RSP-225 Respiratory Clinical Externship II (2.00 cr.)**

This course provides the students with an opportunity to administer aerosol therapy treatments, perform cardiopulmonary resuscitation, and evaluate infection control. Laboratory (16.00). Prerequisites: RSP-119 and RSP-121.

**RSP-226 Respiratory Clinical Externship III (2.00 cr.)**

This course gives the student a further opportunity to develop clinical skills of airway management, cardiopulmonary resuscitation, aerosol therapy, and patient evaluation rounds. Laboratory (40.00). Prerequisites: RSP-222 and RSP-225.

**RSP-227 Management in Health Care (2.00 cr.)**

This course provides the student with an opportunity to learn the skills necessary to supervise a respiratory therapy department. Emphasis is placed on interpersonal relationships, scheduling employees, budgeting, purchasing equipment, cost-effective management, and computer technology development. Computer skills are required and students will be given opportunities to work on computer programs in the health profession computer labs. Lecture (2.00). Prerequisite: RSP-231.

**RSP-229 Mechanical Ventilation (4.00 cr.)**

This course provides the student with the skills necessary to evaluate patients in need of ventilatory support, to select mechanical ventilatory parameters, and to monitor the patient laboratory exercises. It provides the student with an opportunity to operate ventilators, to change ventilator modalities, and to repair ventilators. Lecture (3.00), Laboratory (3.00). Prerequisite: RSP-226. Corequisite: RSP-231.

**RSP-231 Respiratory Clinical Externship IV (2.00 cr.)**

This course provides the students with clinical experiences in the complete cardiopulmonary assessment of the patient. Emphasis of clinical training is in the critical care areas. Lecture (16.00). Prerequisite: RSP-226. Corequisite: RSP-229.

**RSP-235 Respiratory Clinical Externship V (2.00 cr.)**

This course enables the student to continue training in the critical care areas, pulmonary function laboratory and pulmonary clinical. Emphasis is placed on patient evaluation and decision-making skills. Laboratory (16.00). Prerequisite: RSP-231.

**RSP-240 Diagnostic Monitoring and Patient Assessment (4.00 cr.)**

This course provides the student with an understanding of logical therapeutic interventions based upon pulmonary and hemodynamic procedures utilized in the collection, analysis, and the interpretation of this data in diagnosis and evaluation of treatment of the patient. Attention is given to fundamental physiological concept because these concepts provide a foundation for discussion of cardiopulmonary pathophysiology and common cardiopulmonary abnormalities that occur in patients. Lecture (3.00), Laboratory (3.00). Prerequisites: RSP-222 and CHM-112.

**RSP-241 Neonatal and Pediatric Respiratory Care (3.00 cr.)**

This course is a comprehensive overview of pediatric and neonatal respiratory care. Special considerations of respiratory care practice unique to pediatrics and neonatology are discussed. Topics include pediatric anatomy and physiology, fetal development, clinical assessment, oxygen therapy, airway management, mechanical ventilation, resuscitation, cardiopulmonary pathophysiology and disorders specific to this specialty. Lecture (2.00), Laboratory (2.00). Prerequisite: RSP-229.

**RTT – RADIATION THERAPY****RTT-110 Introduction to Radiotherapy and Patient Care Management (2.00 cr.)**

This course is an exploration of the foundation of radiation therapy practices and variety of roles for the professional in the delivery of health care. Principles of practice, professional responsibilities, medical law and ethics will be addressed. Lecture (2.00). Corequisites: RTT-120, RTT-121, RTT-130, and RTT-150.

**RTT-120 Radiation Therapy Practices I (4.00 cr.)**

This course introduces the student radiation therapist to treatment equipment and techniques. Topics include patient immobilization, localization, simulation, documentation, patient positioning, treatment delivery parameters, prescriptions, and patient care. Lecture (3.00), Laboratory (3.00). Corequisites: RTT-110, RTT-121, RTT-130, and RTT-150.

**RTT-121 Radiation Therapy Clinical Practicum I (2.00 cr.)**

This course serves as a clinical orientation to radiation therapy where students are afforded an opportunity to develop professional clinical skills and knowledge through structured rotations and assignments in radiation therapy. Treatment competencies and related objectives will be used to measure clinical outcomes. Students will be afforded 352 hours for this clinical experience. Clinical (40.00). Corequisites: RTT-110, RTT-130, and RTT-150.

**RTT-130 Radiation Biology and Safety (3.00 cr.)**

This course explores the cellular and systemic effects of radiation exposure. Radiation health, safety, and federal and state requirements will be enforced. Lecture (3.00). Corequisites: RTT-110, RTT-120, RTT-121, and RTT-150.

**RTT-150 Principles Diagnostic Radiation Physics (3.00 cr.)**

This course is a continuation of the exploration of radiation physics. Emphasis will be on basic principles of physics, atomic structure, electromagnetic and particulate radiation, x-ray circuits, radiographic tubes and radiation production. Lecture (3.00). Corequisites: RTT-110, RTT-120, RTT-121, and RTT-130.

**RTT-200 Survey of Diseases (3.00 cr.)**

This course orients students to disease and disorders that compromise the human body. Emphasis is on cellular, systemic and manifestations. There will be an emphasis on the management of pathologies as well. Lecture (3.00). Prerequisite: RTT-120. Corequisites: RTT-210, RTT-220, RTT-221, and RTT-230.

**RTT-210 Dosimetry and Treatment Practices (3.00 cr.)**

This course applies the concepts of radiation physics to therapy practice. Treatment units, scatter radiation analysis, isodose curves, patient contouring, dosimetric calculations, compensating filtration and equipment calibration are introduced. Lecture (3.00). Prerequisites: RTT-110 and RTT-150. Corequisites: RTT-200, RTT-220, RTT-221, and RTT-230.

**RTT-220 Radiation Therapy Practices II (4.00 cr.)**

This course is an exploration of cancer; its detection, diagnosis, correlation and prognosis. The focus of the course is on the management of neoplastic disease and its mechanism of spreading. Various laboratory experiments will be used to demonstrate the role of radiation therapy in the treatment of cancer. Lecture (3.00), Laboratory (3.00). Prerequisite: RTT-120. Corequisites: RTT-200, RTT-210, RTT-221, and RTT-230.

**RTT-221 Radiation Therapy Clinical Practicum II (2.00 cr.)**

This course affords student radiation therapists an avenue to continue their development of professional skills through rotations on various treatment machines, treatment planning, and simulation. Objectives and treatment competencies will be used to assess outcomes. Students will be given 352 hours for this clinical experience. Clinical (40.00). Prerequisite: RTT-121. Corequisites: RTT-200, RTT-210, RTT-220, and RTT-230.

**RTT-222 Radiation Therapy Clinical Practicum III (2.00 cr.)**

This course affords student radiation therapists with an avenue to continue the development of advanced professional clinical skills through the correlation of didactic theory. Students continue towards competency and mastery and will be given 408 hours of clinical experience. Clinical (40.00).

Prerequisites: RTT-121 and RTT-221. Corequisites: RTT-120, RTT-121, RTT-130, and RTT-150.

**RTT-230 Advanced Procedures (2.00 cr.)**

This course explores advanced practices that the student will incorporate into their foundation of knowledge. Cross-sectional anatomy will be presented through didactic presentation. Quality control parameters for therapeutic and simulation equipment will be presented through a synchronous didactic and laboratory presentation. There will be an introduction to computing, information processing, computer concepts and various laboratory experiments. Lecture (1.00), Laboratory (2.00). Prerequisites: RTT-120 and RTT-150. Corequisites: RTT-200, RTT-210, RTT-220, and RTT-221.

**SOC – SOCIOLOGY****SOC-101 Sociology (3.00 cr.)**

This course is an examination of the culture and structure of human societies. The course focuses on social groups and institutions, their norms and controls, and how and why they change. Topics of discussion covered include the family, education, deviance, race and ethnicity, gender roles, social change, and social inequalities. >General Education Course. Lecture (3.00).

**SOC-102 Introduction Human Services (3.00 cr.)**

This course is an analysis of social service systems in the United States. The course provides an overview of educational, mental health, childcare, and recreational social service agencies. Through group participation, lectures, role-playing, and field trips, students learn to recognize the common aspects of helping within the broad field of human services. Lecture (3.00).

**SOC-103 Sociology Family (3.00 cr.)**

This course is a study of the oldest and most fundamental social institution. This course analyzes various types of courtship, parenting, human sexuality, marital breakup, and family patterns. Family life is viewed from the perspective of society and of the individual. Students are encouraged to examine their own family patterns in relation to the broad range of possibilities that are discussed. >General Education Course. Lecture (3.00).

**SOC-113 Social Problems (3.00 cr.)**

This course is the study of contemporary social issues and problems in the United States. Various theoretical perspectives are utilized in an effort to understand why particular issues become defined as problems, to determine the origin of social problems, and to assess critically proposed solutions to these perceived problems. Topics of discussion can include crime and delinquency, poverty, family violence, overpopulation, war, AIDS, sexual assault, mental illness, racism, sexism, and classism (social inequality). >General Education Course. Lecture (3.00).

**SOC-115 Introduction to Substance Abuse (3.00 cr.)**

This course presents an introductory systems-oriented approach to addressing alcohol and other drug problems. Providing an overview of chemical dependency and addiction services, the course examines causal theories, models, and definitions. In addition, intervention and prevention strategies, as well as public policy issues will be explored. Special attention will be given to the family systems perspective in theory, research, and treatment. Lecture (3.00).

**SOC-116 Substance Abuse Counseling (3.00 cr.)**

This course offers an introduction to the field of substance abuse counseling, and examines the impact of substance abuse on individuals, families and society. Specific techniques for counseling the alcoholic and the problem drinker are presented. Additionally this course will address the etiology of substance abuse, intervention tactics, and primary/relapse prevention strategies will be discussed. Special attention will be given to substance abuse problems in diverse populations. Lecture (3.00).

**SOC-120 Sociology of Gender Roles (3.00 cr.)**

This course is a study of the changing roles of men and women in contemporary society. Topics of discussion covered include the biological bases for differentiation in gender roles, male and female roles in a cross-cultural perspective, changing expectations for men and women in work and sports, the sexual revolution, and the consequences of gender role change. >General Education Course >Diversity Course. Lecture (3.00).

**SOC-121 The Changing Roles of Women (3.00 cr.)**

This course is an Introductory, interdisciplinary study of the changing roles of women today. Topics of discussion include women's roles in a cross-cultural and historical perspective, the influence of biology, sexuality, and psychology on the roles of women, women in the work force, women as portrayed in literature, the impact of religious beliefs on women, women's changing family roles, and traditional and present-day feminism. >Diversity Course. Lecture (3.00).

**SOC-222 Ethnic-Minority Groups Relations (3.00 cr.)**

This course is a study of the diverse ethnic and multicultural structure of the United States. Particular attention is given to Native Americans, Hispanic Americans, Asian Americans, African Americans, Italian Americans, Irish Americans, and Jewish Americans. Topics taught include social, economic, and familial structures of various ethnic groups, the dislocation of new immigrants, prejudice and discrimination, and the life styles of various minority groups. >General Education Course. >Diversity Course. Lecture (3.00). Prerequisite: SOC-101.

**SOC-461 Co-Op Work Experience (Sociology) (1.00 cr.)**

This course provides a student with the opportunity to gain human relations work experience in social institutions that relate to his/her career goals. This program is under professional guidance in a college approved work environment. Students are supervised by a faculty member, and job placement assistance is available through the Co-Op office. Lecture (1.00), Cooperative (3.00). Prerequisite: SOC-101.

**SOC-462 Co-Op Work Experience (Sociology) (2.00 cr.)**

This course provides a student with the opportunity to gain human relations work experience in social institutions that relate to his/her career goals. This program is under professional guidance in a college approved work environment. Students are supervised by a faculty member, and job placement assistance is available through the Co-Op office. Lecture (1.00), Cooperative (8.00). Prerequisite: SOC-101.

**SOC-463 Co-Op Work Experience (Sociology) (3.00 cr.)**

This course provides a student with the opportunity to gain human relations work experience in social institutions that relate to his/her career goals. This program is under professional guidance in a college approved work environment. Students are supervised by a faculty member, and job placement assistance is available through the Co-Op office. Lecture (1.00), Cooperative (12.00). Prerequisite: SOC-101.

**SPE – SPEECH****SPE-001 Speaking/Listening I for International Students (3.00 cr.)**

This course for International Students is designed for beginning students whose native language is not English. The course aims at developing comprehension of the spoken language, greater fluency, and intelligibility in speaking American English. This course should be taken in conjunction with American Language I. Lecture (3.00).

**SPE-002 Speaking/Listening II for International Students (3.00 cr.)**

This course is designed for Intermediate students whose native language is not English. The course aims at extending and reinforcing students' skills in listening comprehension, pronunciation, and fluency through extensive practice in using spoken American English. This course should be taken in conjunction with American Language II. Lecture (3.00). Prerequisite: SPE-001.

**SPE-003 Speaking/Listening III for International Students (3.00 cr.)**

This course is designed for students for whom English is not a native language. This course seeks to expand students' listening skills, language comprehension, and speech fluency and to develop their confidence in their English speaking skills. This course should be taken in conjunction with American Language III. Lecture (3.00). Prerequisite: SPE-002.

**SPE-005 Basic Communication (3.00 cr.)**

This is a practicum course specifically designed to improve general communication skills. The course provides usable techniques in speaking and listening skills. Lecture (3.00).

**SPE-006 American Language Pronunciation (1.00 cr.)**

This is a course designed to help the nonnative speakers of English improve their American pronunciation. Basic drill material on all the individual sounds, the more important combinations of the English sound

system, and the study of intonations and stress in ordinary speech patterns will be provided for practice. Laboratory (2.00).

**SPE-007 Advanced Pronunciation English Language Learners (1.00 cr.)**

This course is designed to help the advanced nonnative speakers of English to polish their American pronunciation. The primary goals of pronunciation training are clarity of speech and effective communication. Emphasis of this course is placed on rhythm, phraseology, intonation, thought groups, and linking. Individual challenging vowels and consonant blends are addressed. This course offers many opportunities to help students internalize and use their new skills through interactive activities. Laboratory (2.00). Prerequisite: SPE-006.

**SPE-009 American Language Foundations: Speaking and Listening (3.00 cr.)**

This course is for international students with little or no exposure to English. It provides them with instruction in basic expression and understanding simple oral language, including following instructions. They will learn to use vocabulary in everyday speaking situations. Lecture (3.00).

**SUR – SURGICAL TECHNOLOGY****SUR-101 Principles of Surgical Technology I (Fall Only) (6.00 cr.)**

This course is a study of the surgical technologist's role as a member of the surgical team. Surgical principles, technique, and procedures are taught. The laboratory segment consists of demonstrations and return demonstrations of performance skills. Lecture (5.00), Laboratory (3.00). Corequisites: SUR-102, SUR-103 and SUR-104.

**SUR-102 Surgical Technology Externship I (Fall Only) (2.00 cr.)**

This course introduces the student to the operating room environment. Approximately six weeks are spent on campus in a preclinical segment, during which time the student is exposed to background information and practice of entry-level skills. The remaining time is spent in the clinical area with directed experience in surgical procedures and operating room practice. Laboratory (16.00). Corequisites: SUR-101, SUR-103, and SUR-104.

**SUR-103 Surgical Terminology (Fall Only) (1.00 cr.)**

This course is a study of the basic structure of medical and surgical words, including roots, combining forms, prefixes and suffixes. Emphasis is placed on correct pronunciation and definition of surgical terms, allowing the student to build a professional vocabulary for working in the operating room. Lecture (1.00). Corequisites: SUR-101, SUR-102, and SUR-104.

**SUR-104 Microbiological Applications in Surgery (Fall Only) (2.00 cr.)**

This course is a study of microorganisms and their relationship to disease. This overview of the fundamentals of Microbiology includes historical aspects, cell structure, and the functions of microorganisms. Emphasis is placed on infectious disease, modes of transmission, infection control and their clinical application in surgery. Discussion is centered on the role of the Surgical Technologist regarding operating room techniques, infection control and sterilization, and disinfecting of supplies, instruments and the environment. Lecture (2.00). Corequisites: SUR-101, SUR-102, and SUR-103.

**SUR-201 Principles of Surgical Technology II (Spring Only) (5.00 cr.)**

This course is an in-depth study of specialty surgical procedures with emphasis on common diseases and surgical procedures in relation to the various body systems. Lecture (5.00). Prerequisites: SUR-101, SUR-102. Corequisite: SUR-202.

**SUR-202 Surgical Technology Externship II (Spring Only) (2.00 cr.)**

This course gives the student the opportunity for further directed experience in the operating room. The student will scrub for procedures in general and specialty areas surgery. A study of surgical instrumentation and equipment is also included in this course. Laboratory (24.00). Prerequisites: SUR-101 and SUR-102. Corequisite: SUR-201.

**SUR-203 Surgical Technology Externship III (Summer) (1.00 cr.)**

This course enables the student to continue with directed experience in the operating room. Emphasis is on refining skills and scrubbing for a wide variety of surgical procedures. Laboratory (24.00). Prerequisites: SUR-201 and SUR-202.

## TEC – TECHNOLOGICAL SCIENCES

**TEC-145 Introduction to Quality Control (4.00 cr.)**

This course is designed to give students theoretical background and a working knowledge of Quality Control systems used in various Biotechnology, Pharmaceutical, Personal Care, Food and related industries. The course will include an introduction to the statistical methods used to implement Quality Control goals. Lecture (3.00), Laboratory (3.00).

**TEC-150 Quality Control Biotechnology I (3.00 cr.)**

This course is designed to familiarize students with the instrumentation and methods commonly used to insure Quality Control in the Biotechnology, Pharmaceutical, Personal Care, Food and related industries. Students will become familiar with the safety standards, documentation methods, instrumentation and regulatory agencies that set the standards. Students will learn to evaluate processes for adherence to industry safety and quality standards and to maintain a laboratory notebook that meets FDA standards. Lecture (2.00), Laboratory (3.00).

**TEC-180 Problem Solving Using Technology (4.00 cr.)**

This course is a hands-on course using computers and graphic calculators to solve problems related to various industrial and engineering technologies. Lecture (3.00), Laboratory (3.00).

**TEC-190 Introduction to Geographic Information System (3.00 cr.)**

This course introduces the student to the basic underlying principles of geography that deal with measurements and analysis of the Earth's surface and the field of geographic information systems. The critical underlying issues of GIS will be discussed in the context of the learned principles and promote critical thinking by the student. Students will learn the fundamentals of computer generated GIS by using the leading GIS software product, ArcView. Lecture (2.00), Laboratory (2.00).

**TEC-191 Introduction to Mapping and Cartography (3.00 cr.)**

This course introduces students to the science of cartography including a history of the discipline and its current practices. Topics include basic map use and analysis, the display of quantitative and qualitative information, and map production techniques. Lecture (2.00), Laboratory (2.00).

**TEC-201 Science Laboratory Technology I (4.00 cr.)**

This course is designed to give students a working knowledge of the instrumentation used in the modern chemical and biochemical laboratory. Emphasis will be placed on the study of techniques that have the broadest range of applications. Topics studied will include enzyme purification, DNA sequencing, spectroscopic techniques, chromatography and computer interfacing of laboratory instruments. Laboratory (8.00). Prerequisite: CHM-212.

**TEC-202 Science Laboratory Technology II (4.00 cr.)**

This course is designed to give students a working knowledge of the instrumentation used in the modern physics laboratory. Emphasis will be placed on the study of techniques that have the broadest range of applications. Topics will include lasers and other optical techniques as well as materials science and scanning/probe techniques. Laboratory (8.00). Prerequisites: PHY-186 and TEC-201.

**TEC-203 Work Based Learning for Science Technology I (1.00 cr.)**

This course is designed to give students experience in on-the-job laboratory situations to which they can apply the lessons of their interdisciplinary, advanced laboratory-based science technology courses. Students in this course will be counseled by industry and faculty mentors. Laboratory (4.00). Prerequisite: TEC-201. Corequisite: TEC-202.

**TEC-204 Work Based Learning for Science Technology II (2.00 cr.)**

This course is the second semester of Work Based Learning for Science Technologies designed to give students experience in on-the-job laboratory situations to which they can apply the lessons of their interdisciplinary, advanced laboratory-based science technology courses. Students in this course will be counseled by industry and faculty mentors. Laboratory (6.00). Prerequisite: TEC-203.

**TEC-235 Procedure Writing (4.00 cr.)**

This course is designed to develop the students' ability to appreciate the significance of documentation in assuring product integrity. The student will learn to write basic procedures that conform to regulatory guidelines and to

analyze existing documentation for adequacy. The course will consist of taking a process such as the manufacture of a solution, and using Excel to develop the documentation required for product development, manufacture, safety, quality control, and non-conformance. Procedures will be peer evaluated in the laboratory for ease of comprehension and implementation and for adherence to industry safety and quality standards. Student SOPs will be approved and filed in accordance with FDA guidelines. Lecture (3.00), Laboratory (3.00). Prerequisite: TEC-145.

**TEC-240 Quality Control: Microbial Contamination (4.00 cr.)**

This course is designed to familiarize students with monitoring methods commonly used to prevent contamination and spoilage in the Biotechnology, Pharmaceutical, Personal Care, Food and related industries. Students will be introduced to the microbial world and become familiar with the biology of the common microbial contaminants. Students will learn the common laboratory procedures used to monitor microbial contamination. Students will learn the documentation methods, the contamination standards, for various devices and preparations and the regulatory agencies that set the standards. Students will learn how to adhere to industry safety and quality standards for microbial contamination and maintain a laboratory environment that meets FDA standards. Lecture (3.00), Laboratory (3.00). Corequisite: TEC-145.

**TEC-250 Quality Control Biotechnology II (3.00 cr.)**

This course is designed to familiarize students with the maintenance and operation of the instrumentation commonly used in the Pharmaceutical, Personal Care, Food and related industries according to industry standards of quality control. Students will learn the basic principles and mechanics of the common instruments used to assess quality control, e.g. the pH meter, spectrophotometer, filtration instrumentation, centrifuges, HPLC etc. Students will learn to validate and maintain instrumentation and keep maintenance records. Students will learn to evaluate processes used in the laboratory for adherence to industry safety and quality standards and will maintain records that meet FDA standards. Lecture (2.00), Laboratory (3.00). Corequisite: TEC-150.

**TEC-292 Introduction to Remote Sensing (3.00 cr.)**

This course explores the topics of satellite imagery and aerial photography. Students gain an understanding of how digital satellite images and air photos are created and used in geology, environmental management and civil engineering. Lecture (2.00), Laboratory (2.00). Prerequisite: TEC-191.

**TEC-293 Advanced Geographic Information Systems (3.00 cr.)**

This course broadens understanding of GIS and includes discussions of cartographic data formats, cartographic representations, computer programming for GIS, database management and Internet based mapping. The laboratory section will focus on use of advanced functions of ArcView GIS including all extensions, GIS programming with Avenue and Map Objects. Students learn the principles of GIS project management and data documentation. Lecture (2.00), Laboratory (2.00). Prerequisite: TEC-190.

## THR – THEATRE

**THR-101 Introduction to the Theatre (3.00 cr.)**

This course is a study of live theatre and of how it is produced, how it has developed historically and culturally, and how it is analyzed and evaluated. This is primarily a theory course, but it also includes theatre-going assignments. >General Education Course. Lecture (3.00).

**THR-109 History of Musical Theatre (3.00 cr.)**

This course is a chronological survey course that explores musical theatre from its early beginnings to the present. In a lecture and discussion format, students will explore examples of musical theatre to illustrate musical elements, musical and theatrical techniques, and structural form. Selected works will be considered from the context of their relationship with historical and artistic values. >General Education Course. Lecture (3.00).

**THR-110 Basic Acting Techniques (3.00 cr.)**

This course utilizes practical exercises to aid the beginning actor in developing technique from which to build self-confidence and believable characterizations. The course stresses the importance of self-discipline in developing creativity and freedom in voice and movement. Assignments include the presentation of scenes from various works during the semester. Lecture (2.00), Laboratory (2.00).

**THR-111 Oral Interpretation of Literature (3.00 cr.)**

This course explores the development of performance and vocal techniques in the oral presentation of all types of literature. The use of variety in pitch, volume, tempo, and attitude is stressed in communicating the author's meaning through the reader to the audience. Following specific guidelines, most of the literature is selected directly by each student. Lecture (3.00).

**THR-113 Movement for the Performing Artist (2.00 cr.)**

This is a practicum course in directing the student to experience, explore, and visualize movements. The aim of the course is to help the actor become a more physically secure and expressive performer. Lecture (3.00).

**THR-120 Stage Make-Up (1.00 cr.)**

This course provides a practical approach to makeup techniques for theatre and related arts. Through practical experience, students investigate basic, character, and stylized makeup. Lecture (1.00), Laboratory (1.00).

**THR-124 Dance Experience (3.00 cr.)**

This is a practicum course that introduces the student to various dance forms. By attending performances, tracing the development of the particular form, studying the demands the art form makes upon its performers, discussing critics' views, and evaluating the experience, students are exposed to broad representation of dance experiences. Lecture (3.00).

**THR-131 Introduction to Stagecraft and Lighting (3.00 cr.)**

This course introduces the student to the theory and practice of stagecraft. It includes study in scene design, practice in construction of sets, and the setting and control of lighting. Lecture (2.00), Laboratory (2.00).

**THR-140 Introduction to the Cinema (3.00 cr.)**

This course is a study of film as an art form. The course is designed to awaken a more sensitive and critical response to the cinema through an understanding of its form, content, development, and criticism. Films are screened to demonstrate these elements. >General Education Course. Lecture (2.00), Laboratory (2.00).

**THR-150 Summer Theatre Workshop (6.00 cr.)**

This is an intensive, practicum course in the requisite skills in producing a live theatrical production. Students will be exposed to all areas of the theatre crafts. A selected play will be completely produced for public presentation. This will be accomplished through collective class involvement in play selection, casting, rehearsal, stage management, makeup, set design and construction, lighting, costuming, promotion, and performance. Lecture (3.00), Laboratory (6.00).

**THR-210 Scene Study (3.00 cr.)**

This course includes advanced work in characterization, vocal and body control, and exercise in the development of style and technique relevant to scenes and plays selected for study and presentation. Lecture (2.00), Laboratory (2.00). Prerequisite: THR-110.

**THR-214 Audition Techniques (2.00 cr.)**

This is a practicum course that helps the student investigate, select, and prepare audition material appropriate to the individual and the audition call. The course includes exercises in handling 'cold' readings and in learning to look at auditions from the casting director's point of view. Lecture (2.00) Prerequisite: THR-110.

**THR-215 Directing for the Stage (3.00 cr.)**

This course is designed to instruct students in the fundamentals of direction for the stage. Student directors will learn how to analyze a script, cast, block, and direct a scene that will be presented in a performance for the public. This course explores various directing techniques that emphasize not only the artistic approach but also the practical and technical elements of the theatre. Lecture (2.00), Laboratory (2.00). Prerequisites: THR-101 and THR-110.

**THR-216 Theatre Production Workshop (4.00 cr.)**

This is a practicum course that produces a selected dramatic work as a result of collective class involvement in casting, set design and construction, lighting, costuming, makeup, promotion, rehearsal, stage management, and performance. The workshop culminates in a public performance of the project. Lecture (4.00). Prerequisites: THR-110 and THR-131.

**THR-217 Theatre Performance and Production (2.00 cr.)**

This is a practicum course in which students are introduced to acting and/or technical production. As a part of the course, students will actually be involved in theatre productions. Lecture (1.00), Laboratory (2.00). Prerequisite: THR-131.

**THR-231 Stage Electrics (3.00 cr.)**

This course is designed to familiarize the student with the fundamental skills requisite to actualizing lighting and sound designs. Emphasis is given to the identification, use, and maintenance of equipment, as well as to basic electronics theory and practice. Special attention is given to basic theories and aesthetics of light and sound as design elements. Lecture (4.00). Prerequisite: THR-131.

**THR-232 Stage Management (1.00 cr.)**

This course is an analysis of the techniques and responsibilities of the stage manager in the various forms of the performing arts. Areas of study covered include stage management in the theatre, concerts, and television. Lecture (1.00). Prerequisite: THR-131.

**THR-236 Lighting Design (3.00 cr.)**

This is a practicum course in the principles and actual techniques of lighting design. Course work includes lectures, demonstrations, and lab sessions on equipment, color optics, and the setting and control of lighting for all forms of stage performance. A portion of the course is devoted to the contemporary lighting techniques used in clubs and rock concerts. Lecture (2.00), Laboratory (2.00). Prerequisite: THR-136.

**THR-240 The Classic Cinema (3.00 cr.)**

This course is an in-depth study of the style, philosophy, and significance of selected directors and films. Lecture (3.00). Prerequisites: CIN-140/THR-140.

**THR-464 Co-Op Experience (Stage Technology) (4.00 cr.)**

This is a fieldwork course in preproduction, production, and/or shop work arranged on an individual basis by the student. The student must attend periodic seminars and/or prepare reports or other projects as required by the Theatre Arts faculty. Credit is based on a predetermined number of hours/weeks worked in an approved theatre shop, or other entertainment facility. Job placement assistance is available through the Co-Op office. 240 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (16.00).

**VET – VETERINARY TECHNOLOGY****VET-102 Introduction to Veterinary Technology (1.00 cr.)**

This course introduces the student to the profession of veterinary technology through a study of the duties and responsibilities of the graduate veterinary technician and available career opportunities. In addition, other basic issues such as occupational safety and health, membership in professional organizations, certification and licensing, professional standards and behavior, the human-companion animal bond, and Introductory animal restraint and handling will be covered. The course is the prerequisite to all other VET courses. Lecture (1.00). Corequisite: VET-103.

**VET-103 Veterinary Medical Terminology (1.00 cr.)**

This course introduces the student to prefixes, suffixes, and word roots used in the language of veterinary medicine. Topics presented include veterinary medical vocabulary and the terms that relate to the anatomy, physiology, pathological conditions, and treatment of selected systems in the various species. Upon completion, students should be able to pronounce, spell, and define medical terms as related to body systems and their pathological disorders. Lecture (1.00). Corequisite: VET-102.

**VET-104 Research Animal Technology (Spring Only) (3.00 cr.)**

This course is an introduction to the handling, husbandry, and nursing care of the common laboratory animals. In addition, classroom study will cover the principles and ethics of animal research, as well as the laws that regulate the use of animals to ensure that they are treated humanely. Laboratory sessions provide hands-on training in restraint, drug administration, sample collection, anesthesia and research techniques. Dissection is required. Lecture (2.00), Laboratory (3.00). Prerequisites: VET-102 and VET-103.

**VET-110 Nutrition and Principles Feeding (Spring Only) (2.00 cr.)**

This course is designed to introduce the fundamentals of nutrition. Materials cover the six classes of nutrients (water, protein, carbohydrates, lipids, minerals, and vitamins); their general functions, deficiencies, and toxicities; general digestion, absorption, utilization, and excretion of these classes in domestic animals. We will cover the feeding of animals in health and disease during various stages of the life cycle. Of primary concern will be the dietary management of specific diseases that affect domestic animals. Lecture (2.00). Prerequisites: VET-102 and VET-103.

**VET-112 Veterinary Pharmacology (Spring Only)(3.00 cr.)**

This course is a study of pharmacology and its practical applications. This course is designed to give the student a basic understanding of drugs and other substances used in the treatment of disease. Emphasis is on classification of drugs based on their effects and therapeutic usage, sources of drugs, standards and regulations, weights and measures, conversions, labeling, and pharmacy maintenance. In addition, the student studies possible toxicological effects of these drugs and other toxic plants and substances. Lecture (3.00). Prerequisites: VET-102 and VET-103.

**VET-203 Veterinary Nursing I (Fall Only) (3.00 cr.)**

This course will furnish the skills and considerations necessary for the nursing duties of the veterinary technician. Topics include general animal care, handling and restraint, administration of medications and bandaging techniques. Special emphasis will be placed on safety of both patient and handler. Includes laboratory demonstrations and practice on live animals. Lecture (1.00), Laboratory (6.00). Prerequisites: VET-102, VET-103, VET-110, VET-112, BIO-115, and BIO-215.

**VET-204 Veterinary Dental Techniques (3.00 cr.)**

This course encompasses various procedures in veterinary dentistry along with the skills necessary to assist the veterinarian in a complete dental prophylaxis and other complicated dental procedures. Oral and dental anatomy will be reviewed. The course will focus on the operation and maintenance of dental equipment, including dental radiography; the performance of a small animal dental prophylaxis procedure; and a survey of dental diseases in small and large animals and exotics. Emphasis will be placed on the scope of services that may be provided by the veterinary technician, including client education. Lecture (2), Laboratory (3.00). Prerequisites: BIO-215 and VET-112; Corequisite: VET-207.

**VET-205 Clinical Laboratory Procedures I (Fall Only) (3.00 cr.)**

This course deals with the examination of blood, urine, and other body substances for diagnostic and prognostic purposes in veterinary practice. Students will learn to perform complete blood counts, blood chemistries, serological tests, and urinalysis. Lecture periods will cover the theories on which the tests are based and the relevance of laboratory results in the evaluation of the health of animals. Lecture (2.00), Laboratory (3.00). Prerequisites: VET-102, VET, 103, BIO-115, and BIO-215.

**VET-207 Diagnostic Imaging (Fall Only) (3.00 cr.)**

This course is an introduction to basic radiology, ultrasound and associated diagnostic techniques. The student will learn how to position correctly a patient, calculate exposure values, expose radiographic film, and process radiographs of diagnostic quality, both manually and automatically, for the veterinarian to examine. Special emphasis is placed on the potential hazards of radiation and occupational safety. Laboratory experiences provide skills practice in radiographic technique. Lecture (2.00), Laboratory (3.00). Prerequisites: VET-102, VET-103, BIO-115, and BIO-215.

**VET-214 Veterinary Nursing II (Spring Only) (3.00 cr.)**

This course is a continuation of Veterinary Nursing I. Principles of emergency care, intensive care, administration of drugs and fluids, shock therapy, oxygen therapy and the application of indwelling catheters will be discussed. This course will include a general study of diseases, their definition, etiology, pathogenesis, clinical signs, diagnosis, prevention, and treatment. Intensive care nursing will include hands on experience with animals and models. Lecture (1.00), Laboratory (6.00). Prerequisite: VET-203.

**VET-216 Veterinary Office Management (Fall Only) (2.00 cr.)**

This course is designed to introduce the student to modern veterinary hospital business practices. A study of inventory procedures, accounting and computer skills, medical records, personnel management, and psychology of client and staff relations will be addressed. The course

emphasizes professional ethics, interpersonal, and client communication. Lecture (2.00). Prerequisites: VET-102 and VET-103.

**VET-217 Clinical Laboratory Procedures II (Spring Only) (3.00 cr.)**

This course will cover basic parasitology, cytology, histology and necropsy techniques. The student will study the life cycles, pathogenesis, identification, prevention, control and public health concerns of internal and external parasites in domestic animals. Cytological specimens will be collected and processed. A necropsy prosection will be performed, with the collection of specimens and preparation of histology slides for examination by the veterinarian. Lecture (2.00), Laboratory (3.00). Prerequisite: VET-205.

**VET-218 Farm Animal Nursing (3.00 cr.)**

This course is designed to teach the student the skills associated with assisting the large animal practitioner. The essential tasks relating to handling, restraint, treatment, venipuncture and blood collecting, anesthesia and administration of drugs and fluids to farm animals will be covered. A study of diseases of these animals with emphasis on disease control, prevention, treatment, and immunization will be given. Common surgical procedures, as well as specimen collection and preservation. Lecture (2.00), Laboratory (3.00). Prerequisites: VET-110 and VET-112.

**VET-219 Surgical Assistance and Anesthesia (Spring Only) (3.00 cr.)**

This course includes in-depth discussion and hands-on experience with hygiene of the surgical suite and surgical prep room, asepsis, surgical instruments, and sterilization. The student will learn the basics of animal anesthesia as used in surgical procedures. It includes drugs and equipment for anesthetic administration, recovery, and emergencies, along with management of these preparations. We will also provide the student with in-depth coverage of preoperative and postoperative patient care. Lecture (2.00), Laboratory (3.00). Prerequisite: VET-203.

**VET-220 Veterinary Technology Externship I (1.00 cr.)**

This course is a clinical experience providing the student with the opportunity to refine technical skills developed in areas such as animal handling, nursing care and treatment, surgical assistance, radiology, anesthesia, dental prophylaxis, diagnostic laboratory procedures, practice management, and client communication. Students spend 12 weeks in total in a pre-approved small animal hospital, animal research facility, or other allied animal health facility within the metropolitan area. Students train under the supervision of licensed veterinarians and graduate veterinary technicians. Laboratory (16.00). Prerequisites: VET-207, VET-214, VET-216, VET-217, VET-218, and VET-219.

**VET-221 Veterinary Technology Externship II (1.00 cr.)**

This course is a clinical experience providing the student with the opportunity to refine technical skills developed in Externship I. Students spend 12 weeks in total in a pre-approved small animal hospital, animal research facility, or other allied animal health facility within the metropolitan area. Students train under the supervision of licensed veterinarians and graduate veterinary technicians. Veterinary Technology Externship II is the second half of the students' clinical experience. Laboratory (16.00). Prerequisite: VET-220.

**WEX – WELLNESS & EXERCISE SCIENCE****WEX-101 Dynamics of Health and Fitness (2.00 cr.)**

This course is a theory-based study of exercise and its effects on humans. Topics investigated are lifestyle issues in wellness including cardiovascular function, weight management and nutrition, strength, flexibility, stress management and principles/programs of exercising. Lecture (2.00), Laboratory (1.00).

**WEX-104 Aquacise (1.00 cr.)**

This course is an opportunity for the student to increase fitness through selected aquatic activities such as in the water stretching, running, and calisthenics movements. A comfortable exercise program will be adapted to each person's tolerance level. No swimming ability is required. Laboratory (2.00).

**WEX-105 Fitness Center Plus (1.00 cr.)**

This course is a physical activity that provides students with the opportunity to participate in personal conditioning programs. Fitness evaluations and computer prescribed exercise programs are generated for each student. All

equipment in the Fitness Center is employed to develop and maintain these individualized fitness programs. Laboratory (2.00).

**WEX-106 Nutrition, Exercise and Fitness (3.00 cr.)**

This course explores concepts of nutrition as they apply to exercise and performance. Topics include bioenergetics, thermodynamics and the energy equation, ergogenic aids, supplements and computerized diet analysis. Required for Exercise Science Certificate and Degree. Lecture (3.00).

**WEX-125 Introduction to Recreation (3.00 cr.)**

This course is a historical and philosophical study of leisure and recreation and of the agencies and institutions that serve the recreational needs of society. Lecture (3.00).

**WEX-126 Sports Administration (3.00 cr.)**

This course provides an overview of the general principles of management, applies them to the sports industry, and sports organizations in particular. The course includes basic organizational business structures, trends, and observations. Students will also consider the ethical and moral dilemmas facing sports managers as well as the role of sports in society, and explore career opportunities. Lecture (3.00).

**WEX-127 Introduction to Facility and Events (3.00 cr.)**

This course provides the student with an overview and examination of the facility master planning process, including legal requirements and economic considerations. This course includes planning, supervising, maintaining and evaluating sports facilities and events. Financial considerations for both the private and public sector will be emphasized. Everyday supervision of maintenance, inventory, potential vandalism, and comprehensive event planning management is included. Lecture (3.00).

**WEX-128 Sports Fundamental (3.00 cr.)**

This course is a practical study of the fundamental principles and techniques of major sports. Students experience and practice various common sports activities. Lecture (3.00).

**WEX-129 Organization and Direction of Recreational Activities (3.00 cr.)**

This course is a study of the nature and function of play and recreation and of the general principles of organization in the recreational field. Lecture (3.00).

**WEX-159 Cardiopulmonary Resuscitation and Emergency First Aid (3.00 cr.)**

This course provides the student with the knowledge and practical skills needed to respond to various emergency situations including: burns; wounds; respiratory and cardiac problems; broken bones; poisoning; etc. Students will receive certification in CPR and First Aid upon successful completion of the course. Lecture (3.00).

**WEX-130 Massage for Sport and Leisure Activity (3.00 cr.)**

This course is the theory and practice of manual manipulation and its role in exercise. Topics will include basic anatomy, physiologic concepts relative to massage and the healing process, as well as assessment of selected musculoskeletal issues. Included in the course will be the opportunity to investigate and practice a variety of techniques that can be applied to these situations. Lecture (3.00)

**WEX-160 Kinesiology for Personal Training and Exercise (3.00 cr.)**

This course is the study of movement and the neuromuscular skeletal structures and their function in relation to activity. The purpose is to analyze human movement through applied anatomy for injury protection during exercise and sport. The role of muscles during movement and types of muscle contractions will be explored. Emphasis of kinesiology will be explored through related research. Lecture (3.00).

**WEX-163 Nutrition Today (3.00 cr.)**

This course is an investigation of basic nutrition concepts. Current studies and findings are explored and evaluated. Information is used to formulate practices that maximize health benefits. Lecture (3.00).

**WEX-164 Exercise Science (3.00 cr.)**

This course is a theory-based investigation of the effects of exercise on human health, fitness, and sport performance. Emphasis is on basic principles of exercise physiology, exercise prescription, bioenergetics, body

composition, training programs, and practical applications to the exercise setting. Recommended as a prerequisite to WEX-106, WEX-183 and WEX-184. Requirement for Exercise Science Certificate and Degree. Lecture (3.00), Laboratory (1.00).

**WEX-167 Self-Defense (1.00 cr.)**

This is a course that provides the opportunity to learn basic techniques in judo, karate, and jujitsu. (Yellow belt promotion is optional.) Laboratory (2.00).

**WEX-170 Yoga (1.00 cr.)**

This is an introductory level course to the practice of yoga with emphasis on flow and energy. The fundamentals of yoga practice, including meditation and breathing techniques, basic yoga postures (Asanas) and basic flow sequences (Vinyasa) will be the focus. Laboratory (2.00).

**WEX-171 Beginning Golf (1.00 cr.)**

This course is a study of the fundamental theories, skills, etiquette and rules needed to play the game of golf. Laboratory (2.00).

**WEX-172 Intermediate Golf (1.00 cr.)**

This course is designed to acquaint further the student with the game of golf beyond the beginner level, reviewing fundamental skills and developing shot-making strategies. Some previous golf experience recommended either having played the game or taking golf lessons. Laboratory (2.00).

**WEX-173 Beginner Tennis (1.00 cr.)**

This is a course that provides the student with the opportunity to develop the fundamental skills of the game. It also acquaints students with the basic rules, regulations and strategy of both singles and doubles play. Laboratory (2.00).

**WEX-174 Volleyball (1.00 cr.)**

This is a course that provides fundamental skills, strategies, and knowledge of power volleyball through teaching learning experiences and active participation. Laboratory (2.00).

**WEX-175 Beginner Level Swimming (For Non-Swimmers) (1.00 cr.)**

This is a basic course for non-swimmers that includes fundamental water safety and survival, crawl stroke, back crawl, breaststroke, sidestroke, and recreational aquatic activities. Laboratory (2.00).

**WEX-182 Fitness Measurement and Interpretation (3.00 cr.)**

This is a course involving analysis of the parameters of fitness, sport performance, and their assessment. Topics include measurement protocols and the quantitative expression of body composition, aerobic capacity and energy expenditure, strength, endurance, flexibility and sport specific elements relative to exercise application. Requirement for Exercise Science Certificate and Degree. Lecture (3.00).

**WEX-183 Programs and Principles of Conditioning (3.00 cr.)**

This course is an application of theories explored in Exercise Science (WEX-164). This course is designed to provide the student with opportunities to apply conditioning concepts, teaching methodology and presentation experience in a one-on-one and Co-Op teaching setting. Lecture (3.00).

**WEX-184 Sports Medicine – Theory and Practice (3.00 cr.)**

This course develops an awareness of sports medicine and provides the student with concepts, knowledge, and practical skills in the areas of prevention, evaluation, management, and rehabilitation of exercise-induced trauma. Athletic taping for support of joints and muscles is taught and practiced. Lecture (3.00).

**WEX-201 Aerobic Conditioning (Dynamics of Health and Fitness) (1.00 cr.)**

This course is an application of the theories explored in WEX-101. The course is designed to provide students with opportunities to improve cardiovascular health, muscle endurance, flexibility and stress reduction. Different modes of aerobic training will be used which may include movement to music. Laboratory (2.00). Prerequisite: WEX-101.

**WEX-202 Body Conditioning (Dynamics of Health and Fitness Experience) (1.00 cr.)**

This course is an application of the theories explored in WEX-101. The course is designed to effect changes in such fitness areas as

cardiorespiratory endurance, flexibility, strength, and body composition through aerobic conditioning, progressive resistance exercises, and flexibility exercises. The development of personal exercise regimens for lifelong participation is emphasized. Laboratory (2.00). Prerequisite: WEX-101.

**WEX-204 Keep Young, Fit, and Alive (Dynamics of Health and Fitness Experience) (1.00 cr.)**

This course is an application of the theories explored in WEX-101. The course is designed to emphasize the management of musculoskeletal concerns such as low back and stress reduction. It may include aerobic, flexibility and various resistance modalities. Dietary practices may also be addressed. Laboratory (2.00). Prerequisite: WEX-101.

**WEX-205 Swimming for Conditioning (Dynamics of Health and Fitness Experience) (1.00 cr.)**

This course is an application of the theories explored in WEX-101. The course is designed to effect changes in cardiovascular endurance, muscular strength, and flexibility. Students must have good swimming ability. Laboratory (2.00). Prerequisite: WEX-101.

**WEX-206 Weight Training (Dynamics of Health and Fitness Experience) (1.00 cr.)**

This course is an application of the theories explored in WEX-101. The course is designed to effect changes in muscular strength and endurance through a variety of appropriate training techniques and applications. The development of personal exercise regimens for lifelong participation is emphasized. Laboratory (2.00). Prerequisite: WEX-101.

**WEX-207 Core Stability Ball Training (Dynamics of Health and Fitness Experience) (1.00 cr.)**

This course is designed to strengthen the core musculature of the body. Students will strengthen abdominal and low back core musculature, improve posture and balance, enhance flexibility, and decrease occurrence of injury and low back pain. This course will also implement resistance training with the use of free weights and the stability balls to improve upper and lower body strength. The use of specific core and balance equipment will be a focus of this experience. Laboratory (2.00). Prerequisite: WEX-101.

**WEX-208 40+ Fitness (Dynamics of Health and Fitness Experience) (1.00 cr.)**

This course is an application of the theories explored in WEX-101. The course is designed to provide students (40 years or older) with opportunities to increase fitness through individualized programs emphasizing flexibility, aerobic conditioning, muscle strength/endurance and weight management. Laboratory (2.00). Prerequisite: WEX-101.

**WEX-223 Beyond Beginning Tennis (1.00 cr.)**

This course provides the student with an opportunity to refine the fundamental tennis skills and to learn more advanced skills and strategies. Laboratory (2.00). Prerequisite: WEX-101.

**WEX-230 Skin and Scuba Diving (1.00 cr.)**

This is a course that allows students to develop basic skills in skin and scuba diving by means of lectures, demonstrations, and class practice. Students must have good swimming ability. (International certification is optional.) Laboratory (2.00).

**WEX-260 Exercise Physiology (3.00 cr.)**

This is a course that investigates how the human body responds to exercise. Theory and practical application will draw from musculoskeletal, cardiovascular, endocrine and neuromuscular considerations. Lecture (3.00). Prerequisites: WEX-164 and WEX-182.

**WEX-262 Senior Fitness Training I (3.00 cr.)**

This is a course that explores and analyzes specific criteria for planning and implementing exercise programs for seniors. Specific needs for this age group and program characteristics will be stressed. Lecture (3.00). Prerequisites: WEX-164, WEX-159, and WEX-182.

**WEX-263 Senior Fitness Training II (3.00 cr.)**

This course focuses on organizing, designing and presenting various adult fitness programs. Specific gerontological factors such as medical limitations and high/low fitness levels that apply to senior fitness will be

explored as well as marketing and business considerations. Lecture (3.00). Prerequisite: WEX-262.

**WEX-471 Co-Op Work Experience/Exercise Science (1.00 cr.)**

This course enables the student to gain essential hands-on experience in a fitness center under professional guidance and supervision. 60 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (3.00). Prerequisites: WEX-164 and WEX-183.

**WEX-473 Co-Op Work (Sports Management) (3.00 cr.)**

This course provides students with practical experience in professional, collegiate, amateur, or business institutions in sports-related industries. Students can pursue their individual interests and goals through the Co-Op program in Sports Management. 180 minimum hours work experience distributed over the semester. Lecture (1.00), Cooperative (12.00). Prerequisite: WEX-127.

**WRT - WRITING**

**WRT-101 English Composition I (3.00 cr.)**

This course gives students the opportunity for extensive practice in expository writing. The course emphasizes the writing process, and concentrates on the organization and development of ideas in written work and on student responses to reading. Attention is devoted to correct language usage and on research and the basic techniques of MLA documentation. >General Education Course. Lecture (3.00). Prerequisite: EBS-012, EBS-021 or ALP-063.

**WRT-201 English Composition II (3.00 cr.)**

This course continues the emphasis of English Composition I on the writing process, and on critical reading and thinking skills. Particular attention is devoted to writing with sources and to argumentative writing. Emphasis is placed on correct language usage and on research and the techniques of MLA documentation. >General Education Course. Lecture (3.00). Prerequisite: WRT-101.

**WRT-202 Technical Writing (3.00 cr.)**

This course is an introduction to the theory and practice of expository writing in the business, scientific, and industrial fields. Special attention is given to the writing of progress reports, sales and statistical reports, and other types of office, clinical, and scientific material. Lecture (3.00). Prerequisite: WRT-101.

**WRT-204 Creative Writing (3.00 cr.)**

This is a workshop course in which students write in such forms as poetry, fiction, and drama. Students read and discuss each other's work as well as that of published authors. Lecture (3.00). Prerequisite: WRT-101.

**WRT-205 Creative Writing Workshop in Fiction (3.00 cr.)**

This course gives students the opportunity to focus on the elements of fiction writing. Students read and discuss each other's work. Lecture (3.00). Prerequisite: WRT-101.

**WRT-206 Memoir and Creative Non-Fiction (3.00 cr.)**

This is a workshop course in which students write memoir and creative non-fiction using such forms as essay, narrative, and poetry. Students read and discuss each other's work as well as that of published authors; they utilize blogs to store and share their writings. Lecture (3.00). Prerequisite: WRT-101.

**WRT-207 Creative Writing Workshop – Poetry (3.00 cr.)**

This is a workshop course in which students write poetry using both lyric and narrative styles. The course will focus on a study of contemporary poetry, but students will also gain an understanding of traditional poetic forms such as the sonnet, villanelle, sestina, ode, and elegy. In addition to producing a portfolio of original poems, students will read and discuss each other's work as well as that of published authors. Lecture (3.00). Prerequisite: WRT-101.

**WRT-208 Creative Writing Workshop – Playwriting. (3.00 cr.)**

This is a workshop course that allows students to experience and practice the creative process involved in writing. This course provides students with an understanding of dramatic text, the skills necessary to create character, relationship, dialogue, and dramatic action. In addition, the course introduces students to the process of stage performance and managing their scripts for this medium. Lecture (3.00). Prerequisite: WRT-101.

The College reserves the right to change any provisions contained in this publication without prior notice. Students are responsible for the information contained in this catalog. Failure to read this catalog does not excuse students from the requirements and regulations contained herein. The curriculum is accurate as of January 2011. For the most current curriculum, see the e-catalog at <http://www.bergen.edu/apps/ecatalog/index.asp>.

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**Bergen Community College**

400 Paramus Road, Paramus, New Jersey 07652-1595  
(201)447-7100 • (201)447-7845 (TTY)



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