



Academic and Student Affairs
Office of Curriculum Development

Catalog Addendum It's what you know

Fall 2005 – Summer 2007

This addendum includes:

- New, revised, deleted program sequences
- New, revised, deleted course information
- Revised Program Admission Requirements
- Course equivalencies for new, revised or deleted courses
- Summary pages that outline the type of revisions made

Use this addendum in conjunction with the printed Fall 2005 – Summer 2007 Catalog or the online Catalog located at <http://www.tri-c.edu/catalog/0507/default.htm>.

The information contained in this document can also be found on the Web located at <http://www.tri-c.edu/catalog/0507/default.htm>.

Detailed course outlines and program sequences are available under the search feature at <http://www.curricunet.com/cuyahoga>. Username and password are not required.

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SUMMARY OF CHANGES

Course Number	Course Title	Proposal Type
ART-1010	Art Appreciation	Change: Description, Outline
ART-1020	Art History I	Deletion: replaced by ART-2020
ART-1030	Art History II	Deletion: replaced by ART-2030
ART-1110	Sculpture II	Change: Description, Outline
ART-1600	Introduction to Art Therapy	New
ART-1700	Ceramics I	Change: Outline
ART-1710	Ceramics II	Change: Description, Outline
ART-2000	Life Drawing I	Change: Description, Outline, Prerequisite
ART-2010	Life Drawing II	Change: Description, Outline
ART-2020	Art History Survey: Prehistoric to Renaissance	Change: Title, 2000 Level, Prerequisite, Outline
ART-2030	Art History Survey: Late Renaissance to Present	Change: Title, 2000 Level, Prerequisite, Outline
ART-2210	Printmaking I	Change: Description, Prerequisite, Outline
ART-2220	Printmaking II	Change: Description, Outline
ATCT-2330	Trade Show	New
ATCT-2560	Interior Systems III	New
ATPD-1310	Technical Measurements, Hand and Power Tool Use in Pile Driving	New
ATPD-1330	Print Reading for Pile Driving	New
ATPD-1370	Pile Driving on Land and Water	New
ATPD-2020	Pile Driving Technologies	New
ATPD-2220	False Work and Heavy Timber	New
ATPD-2370	Advanced Pile Driving on Land	New
ATPD-2380	Advanced Pile Driving on Water	New
ATPD-2700	Millwright-Pile Driver Weld IV	New
ATPD-2710	Millwright-Pile Driver Weld V	New
ATPD-SS	Applied Industrial Technology - Pile Driving Sequence	New
AUTO-1300	Automotive Engines	Change: Outline
AUTO-2350	Automotive HVAC	Change: Outline
AUTO-2400	Engine Performance	Change: Outline
AUTO-2450	Automotive Electronic Engine Controls	Change: Outline
BADM-1030	Introduction to Industrial Distribution	New
BADM-1040	Principles and Practices of Customer Services	New
BADM-1050	Professional Success Strategy	New
BADM-2490	Industrial Distribution Strategy and Application	New
BADM-SS	Business Management - Industrial Distribution Sequence	New

Summary of Changes

Course Number	Course Title	Proposal Type
CHEM-1020	Introduction to Organic Chemistry and Biochemistry	Change: Prerequisite
DENT-1300	Preventive Oral Health Services I	Change: Outline
DENT-1400	Preventive Oral Health Services	Change: Description, Outline
DENT-2400	Preventive Oral Health Services IV	Change: Prerequisite, Outline
DENT-2430	Dental Hygiene Practice	Deletion: replaced by DENT-2990
DENT-2990	Dental Hygiene Practice	Change: Course Number; Outline
DENT-SS	Dental Hygiene Sequence	Change: Degree
DIET-1300	Principles of Nutrition Care	Deletion: replaced by DENT-1200 and DENT-1320
DIET-SS	Dietetic Technology	Change: Degree
ECED-2500	Infant/Toddler Development, Relationships, and Programs	Change: Prerequisite, Outline
ECON-2610	Principles of Macroeconomics	Change: Outline
EDUC-1011	Introduction to Education	Change: Title; Course Number; Outline
EDUC-1020	Educational Technology	New
EET-1120	Survey of Engineering	New
EET-1140	Productivity Tools for Engineering	New
EET-1210	AC Electric Circuits	Change: Prerequisite, Outline
EET-1240	Digital Circuits/Microprocessors I	Change: Prerequisite, Outline
EET-2110	Industrial Electronics I	Deletion
EET-2111	Industrial Electronics I	Change: Outline (more than 30% content)
EET-2120	Electronics I	Change: Prerequisites, Outline
EET-2150	Printed Circuit Layout	New
EET-2160	Surface Mount Soldering	New
EET-2170	Signal Analysis	New
EET-2290	Electrical Design Project	Change: Description, Prerequisite, Outline
EET-SS	Electrical/Electronic Engineering Technology Sequence	Change: Degree
EMT-2310	Paramedic Theory I	Deletion: replaced by EMT-2330 and EMT-2340
EMT-2320	Paramedic Theory II	Deletion: replaced by EMT-2350 and EMT-2360
EMT-2330	Paramedic Theory I	New
EMT-2340	Paramedic Theory II	New
EMT-2350	Paramedic Theory III	New
EMT-2360	Paramedic Theory IV	New
EMT-SS	Emergency Medical Technology Sequence	Change: Degree
END-2410	Neurophysiology of Electroencephalography/Sleep Disorders	Deletion: replaced by END-2411
END-2411	Neurophysiology of Electroencephalography/Sleep Disorders	Change: Credit Hour

Course Number	Course Title	Proposal Type
END-SS	Electroneurodiagnostic Technology Sequence	Change: Degree
ENG-2730	Exploration of World Mythology	New
ESL-1110	English as a Second Language: Grammar for Communication I	Change: Prerequisite, Outline
ESL-1120	English as a Second Language: Reading and Writing I	Change: Prerequisite, Outline
ESL-1130	Speaking English as a Second Language I	Change: Prerequisite
ESL-1210	English as a Second Language: Grammar for Communication II	Change: Prerequisite, Outline
ESL-1220	English as a Second Language: Reading and Writing II	Change: Prerequisite, Outline
ESL-1230	Speaking English as a Second Language II	Change: Prerequisite
ESL-1310	English as a Second Language: Grammar for Communication III	Change: Prerequisite, Outline
ESL-1320	English as a Second Language: Reading and Writing III	Change: Prerequisite, Outline
ESL-1330	Speaking English as a Second Language III	Change: Prerequisite
GEN-1031	CyberResearch in the Library	Deletion: replaced by GEN-1032
GEN-1032	Information Literacy and Library Research	Change: Title; Outline
HLTH-1310/ EMT-1310	Cardiopulmonary Resuscitation	Change: Outline; Approved for Crosslisting
INTD-SS	Interior Design Sequence	Change: Degree
ISET-1300	Mechanical/Electrical Print Reading	New
ISET-1310	Mechanical Power Transmission	New
ISET-1320	Fundamentals of Fluid Power	New
ISET-1340	Industrial Piping and Tubing	New
ISET-1410	Applied Electricity I	New
ISET-1420	Applied Electricity II	New
ISET-1450	Heating Ventilation Air Conditioning/Refrigeration I	New
ISET-1460	Fundamental Boiler Technology	New
ISET-2210	Commercial Wiring	New
ISET-2220	Fundamentals of Electronics and Instrumentation	New
ISET-2220	Industrial Motor Controls	New
ISET-2240	Applied National Electric Code	New
ISET-2450	Heating Ventilation Air Conditioning/Refrigeration II	New
ISET-2460	Applied Boiler Technology	New
ISET-2500	Programmable Logic Controllers Maintenance I	New
ISET-2510	Programmable Logic Controllers Maintenance II	New
ISET-2520	Programmable Logic Controllers III	New
ISET-2990	Reliability Centered Maintenance	New
ISET-SS	Integrated Systems Engineering Technology Sequence	New
IT-2350	Advanced Database Systems	New
JMC-2000	Media Writing	Change: Lecture/Lab hours
NURS-1500	Self-Care - Elderly	Change: Prerequisite
NURS-1600	Health Deviations I	Change: Prerequisite

Summary of Changes

Course Number	Course Title	Proposal Type
NURS-1701	Community/Home Nursing	Change: Prerequisite
NURS-2300	Specialized Health Care Needs	Change: Prerequisite
OPT-2500	Optical Business	Change: Description, Outline
OPT-2890	Optical Practicum Seminar II	Change: Description
OPT-2990	Lens Surfacing	New
OPT-SS	Optical Technology Sequence	Change: Degree
PE-1460	Pilates	New
PL-1300	Civil Procedure	Change: Description, Prerequisite, Outline
PL-1400	Basic Legal Research and Writing	Change: Prerequisite, Outline
PL-2400	Computer Assisted Legal Research	Change: Description, Prerequisite, Outline
PNUR-1310	Fundamentals of Nursing	Change: Outline
PNUR-1320	Nursing Management of Adults I	Change: Prerequisite, Outline
PNUR-1330	Nursing Management of Adults II	Change: Prerequisite, Outline
PNUR-1340	Nursing Care of Families	Change: Outline
PNUR-CERT	Practical Nursing Certificate	Change: Certificate
PST-1430	Design I - Landscape Design and Construction Graphics	New
PST-1440	Design II: Introduction to Landscape Design	New
PST-2430	Design III - Planting Design	New
PST-2440	Design IV - Advanced Landscape Design	New
PST-SS	Plant Science & Landscape Technology [Design/Build] Sequence	New
VC&D-1300	Graphic Design Drawing	Change: Prerequisite
VC&D-1400	Imaging and Design	Change: Prerequisite
VCDV-1180	Introduction to Digital Video and Digital Filmmaking	New
VCDV-2180	Cinematography for Digital Video	New
VCDV-2280	Digital Video 2: Editing Short Form Video	New
VCDV-2380	Visual Effects Compositing for Digital Video	New
VCDV-2480	Motion Graphics for Digital Video	New
VCDV-2580	Digital Versatile Disk (DVD) Authoring and Design	New
VCDV-SS	Digital Video and Digital Filmmaking Sequence	New
VT-2401	Veterinary Pathology I	Change: Description, Outline
VT-2411	Veterinary Pathology II	Change: Description, Outline

GENERAL APPLICATION PROCEDURES

Business and Technology General Application Procedures

	Program Application/ Information Form	High School Graduate or GED Equivalency	English Requirement	Mathematics Requirement	Other Courses/ Requirements	Notes/ Other Information
Applied Industrial Technology - Pile Driving [Apprenticeship Program]	Contact (216) 391-2828	Not applicable	Not Applicable	Not Applicable	Not Applicable	Intent-to-hire agreement with participating contractor
Integrated Systems Engineering Technology (M)	Not applicable	Required	Eligibility for ENG-1010◇	Eligibility* for MATH-0950 ◇ or higher**	Not applicable	Options available: ●Integrated Systems Maintenance ●Environmental Systems Maintenance
Plant Science and Landscape Technology (Design Build) (E) Pending Final Ohio Board of Regents Approval - projected start Fall 2007	Not required	Not required, but highly recommended	Eligibility for ENG-1010 recommended	Complete placement test	None	●Submit all college transcripts.
Visual Communication and Design Digital Video and Digital Filmmaking (W)	Not applicable	Not required, but highly recommended	Eligibility* for ENG-1010 highly recommended	Eligibility for MATH-1060 or higher* highly recommended	Complete VC&D-1010	●Contact Program Coordinator for additional information. ●Non-degree students may enroll in individual courses if they meet prerequisites.

* Where the chart indicates "eligibility" for a particular course, eligibility may be demonstrated by any of the following:

- Completion of Tri-C's assessment with a score appropriate for placement into the specific course listed on the chart; OR
- Completion of the prerequisite for the course listed on the chart with a grade of "C" or higher (including equivalent courses transferred in from another college or university); OR
- Completion of the course listed on the chart with a grade of "C" or higher (including equivalent courses transferred in from another college or university).

◇Or prior completion of equivalent quarter course (where applicable). Contact Program Manager/Coordinator or campus division office regarding eligible quarter courses.

** MATH-1800/1820 and 2800/2820 will not meet this requirement

COURSE EQUIVALENCY

The below Equivalency Chart lists courses that were approved as equivalent during the 2005-06 Academic Year. This chart is to be used as an addendum to the chart found in Appendix V of the 2005-07 catalog. The Equivalency Chart lists current semester courses that have equivalencies and semester courses that have been officially deleted and therefore are unavailable to students.

<u>DELETED COURSE</u>		<u>CR.</u>	<u>EQUIVALENT COURSE</u>		<u>CR.</u>
ART-1020	Art History I	3	ART-2020	Art History Survey: Prehistoric to Renaissance	3
ART-1030	Art History II	3	ART-2030	Art History Survey: Late Renaissance to Present	3
DENT-2430	Dental Hygiene Practice	1	DENT-2990	Dental Hygiene Practice	1
DIET-1300	Principles of Nutrition	4	DIET-1200 & DIET-1320	Basic Nutrition Nutrition Applications	3 1
EET-2110	Industrial Electronics I	3	EET-2111	Industrial Electronics I	3
END-2410	Neurophysiology of Electroencephalography/ Sleep Disorders	2	EET-2411	Neurophysiology of Electroencephalography/ Sleep Disorders	3
EMT-2310	Paramedic Theory I	10	EMT-2330 & EMT-2340	Paramedic Theory I & Paramedic Theory II	6 6
EMT-2320	Paramedic Theory II	10	EMT-2350 & EMT-2360	Paramedic Theory III Paramedic Theory IV	6 6
GEN-1031	CyberResearch in the Library	2	GEN-1032	Information Literacy and Library Research	2
CROSSLISTED COURSES					
Cross listed courses are identical courses offered in two or more subject areas. They may differ only in subject area code and course number. Credit may be earned once for cross-listed courses.					
<u>CROSSLISTED COURSES</u>		<u>CR</u>	<u>EQUIVALENT COURSE</u>		<u>CR</u>
HLTH-1310	Cardiopulmonary Resuscitation	1	EMT-1310	Cardiopulmonary Resuscitation	1
<u>DELETED COURSE WITH NO EQUIVALENCY</u>					
The following courses have been deleted from the College course inventory and no replacements have been indicated. If you are required to take one of these courses to meet your degree requirements, please see the faculty coordinator or program manager in that department to discuss your options.					
<u>DELETED COURSE WITH NO EQUIVALENCY</u>					<u>CR</u>
EET-2250	Industrial Electronics II				3

APPLIED INDUSTRIAL TECHNOLOGY (PILE DRIVING)

Associate of Applied Science in Applied Industrial Technology-Pile Driving

Students must be currently working in a registered apprenticeship program in conjunction with the U.S. Department of Labor, Bureau of Apprenticeship and Training. The apprenticeship program prepares the student to earn a journey-level status in Pile Driving, as well as an Associate of Applied Science degree in Applied Industrial Technology. A four-year apprenticeship emphasizes the skill set required to be a highly skilled craftsman. Pile Driving is the art of driving down piles with rigs that are large machines that resemble cranes. Work can include driving concrete and metal piling as part of a foundation system, or driving wood and concrete piling to support docks and bridges. Pile Drivers can also be found on offshore oil rigs and as commercial divers in underwater construction.

Suggested Semester Sequence		<u>Credit Hrs.</u>
<u>First Semester</u>		
ATCT-1300	Carpentry I	2
ATCT-1310	Carpentry Safety	2
ATPD-1330	Print Reading for Pile Driving	2
ATMW-1340	Introduction to Pile Driving	2
ATCT-1330	Concrete Form Work I	2
MATH-1160	Technical Mathematics I	4
IT-1010	Introduction to Microcomputer Applications	3
		17
<u>Second Semester</u>		
ENG-1010	College Composition I	3
ATMW-1450	Heavy Rigging	2
ATMW-1490	Millwright Pile Driver Weld I	2
ATPD-1310	Technical Measurements, Hand & Power Tool Use in Pile Driving	2
IT-1020	Information Technology Concepts	2
ATPD-1370	Pile Driving on Land and Water	2
Arts & Hum/Soc & Beh Sci (see AAS Degree requirements)		3
		16
<u>Third Semester</u>		
ATPD-2020	Pile Driving Technologies	2
ATPD-2220	False Work and Heavy Timber	2
ATMW-2230	Millwright Pile Driver Weld II	2
ATPD-2370	Advanced Pile Driving on Land	2
ATCT-2510	Concrete Form Work III	2
Communication...(See AAS Degree requirements) ¹		3
Arts & Hum/Soc & Beh Sci (see AAS Degree requirements)		3
		16
<u>Fourth Semester</u>		
ATPD-2380	Advanced Pile Driving on Water	2
ATMW-2520	Millwright Pile Driver Weld III	2
ATCT-2990	Contracting In A Diverse World <input type="checkbox"/>	3
Arts & Hum/Soc & Beh Sci (see AAS Degree requirements)		2
ATPD-2700	Millwright-Pile Driver Weld IV	2
ATPD-2710	Millwright-Pile Driver Weld V	2
		13
PROGRAM TOTAL		62

¹Minimum 3 semester credits-ENG 2150 highly recommended.

= Capstone course.

BUSINESS MANAGEMENT (INDUSTRIAL DISTRIBUTION)

Associate of Applied Business Degree in Business Management with a Concentration in Industrial Distribution
Pending approval by the Ohio Board of Regents

The Industrial Distribution degree prepares the student for technical sales, sales management, customer service and mid-management positions with wholesale distributors who purchase, warehouse, sell, distribute, and service a wide variety of industrial products. The day-to-day challenges faced by the industrial distributor require a professional with many capabilities. Courses will familiarize you with business management and marketing basics, as well as customer service and applied industrial and electrical engineering concepts.

Suggested Semester Sequence		<u>Credit Hrs.</u>
<u>First Semester</u>		
ACCT-1011	Business Math Applications ... OR	3
ACCT-1310	Financial Accounting	4
BADM-1020	Introduction to Business	3
IT-1010	Introduction to Microcomputer Applications	3
ENG-1010	College Composition I	3
MATH-1060	Survey of Mathematics ¹	3
		15 - 16
<u>Second Semester</u>		
BADM-1030	Introduction to Industrial Distribution	3
BADM-2160	Introduction to Purchasing	3
ECON-2610	Principles of Macroeconomics	4
EET-1120	Survey of Engineering	4
ENG-2151	Technical Writing ... OR	3
SPCH-1010	Fundamentals of Speech Communication	3
		17
<u>Third Semester</u>		
BADM-1040	Principles & Practices of Customer Service	3
MARK-2010	Principles of Marketing	3
BADM-2010	Business Communications	3
ECON-2620	Principles of Microeconomics	4
BADM-2120	Logistics Management	3
		16
<u>Fourth Semester</u>		
MARK-2020	Principles of Salesmanship	3
BADM-1120	Principles of Management ...OR	4
BADM-2600	Introduction to World Trade	3
BADM-2110	Production/Operations Management	3
BADM-2490	Industrial Distribution Strategy and Application <input type="checkbox"/>	3
BADM-2830	Cooperative Field Experience	1 - 3
		13 - 16
PROGRAM TOTAL		61 - 65

¹Any higher level math course may be used to fulfill this requirement except MATH-1800/2800 & 1820/2820.

= Capstone course.

Program Sequences

DENTAL HYGIENE

Associate of Applied Science Degree in Dental Hygiene

Dental Hygienists are licensed primary healthcare professionals, health care educators and clinicians who provide preventive, educational and therapeutic services supporting total health for the control of oral diseases and the promotion of oral health duties. Employment opportunities exist in private practices, health care agencies, hospitals, sales, government research programs and in dental hygiene education programs. Upon successful completion of this curriculum, the graduate may take national and regional board examinations and apply for licensure.

Suggested Semester Sequence

<u>Summer Semester</u>		<u>Credit Hrs.</u>
BIO-1100	Introduction to Biological Chemistry	3
BIO-2330	Anatomy and Physiology I	4
ENG-1010	College Composition I	3
PSY-1010	General Psychology	3
SPCH-1000	Fundamentals of Interpersonal Communication	3
		16

<u>First Semester</u>		<u>Credit Hrs.</u>
BIO-1210	General and Oral Histopathology	4
BIO-2340	Anatomy and Physiology II	4
DENT-1300	Preventive Oral Health Services I	4
DENT-1310	Dental Anatomy	2
DENT-1330	Radiology	3
DENT-1340	Dental Hygiene Care Ethics	1
		18

<u>Second Semester</u>		<u>Credit Hrs.</u>
BIO-2520	Oral Microbiology and Immunology	3
DENT-1400	Preventive Oral Health Services II	5
DENT-1410	Current Concepts in Dental Materials	2
DENT-1420	Periodontics I	2
DENT-1431	Head and Neck Anatomy	2
		14

<u>Third Semester</u>		<u>Credit Hrs.</u>
MATH-1141	Applied Algebra and Mathematical Reasoning ¹	3
DENT-2300	Preventive Oral Health Services III	5
DENT-2320	Periodontics II	2
DENT-2331	Pharmacology and Therapeutics	3
DIET-1220	Nutrition for Dental Hygiene	2
		15

<u>Fourth Semester</u>		<u>Credit Hrs.</u>
DENT-2400	Preventive Oral Health Services IV	5
DENT-2410	Community Oral Health	2
DENT-2990	Dental Hygiene Practice C	1
Arts & Hum/Soc & Beh Sci (see AAS Degree requirements) ²		3
Arts & Hum/Soc & Beh Sci (see AAS Degree requirements)		2
		13

PROGRAM TOTAL 76

¹Any higher level math course may be used to fulfill this requirement except MATH-1800/2800 & 1820/2820.

²Minimum 8 semester credits--must include PSY-1010.

Sociology course highly recommended.

Note: Courses as listed satisfy degree competencies and skills.

C = Capstone course.

DIETETIC TECHNOLOGY

Associate of Applied Science Degree in Dietetic Technology

Graduates in the Dietetic Technology Program are trained food and nutrition professionals. They function as members of the food service and nutrition care teams under the supervision of a registered dietitian. Dietetic technicians promote optimal health through proper nutrition by providing personalized services to meet client's needs and ensure balanced diets through the provision of wholesome, quality food. Employment exists in hospitals, nursing homes, long term care facilities, health departments, early childhood development centers, community nutrition programs, schools and other health care agencies that provide food and nutrition services. This program is fully accredited by the Commission on Accreditation of Dietetics Education.

Suggested Semester Sequence

<u>First Semester</u>		<u>Credit Hrs.</u>
BIO-1100	Introduction to Biological Chemistry	3
ENG-1010	College Composition I	3
DIET-1200	Basic Nutrition	3
DIET-1320	Nutrition Applications	1
DIET-1310	Introduction to Dietetics	2
MA-1020	Medical Terminology I	3
MATH-1141	Applied Algebra and Mathematical Reasoning ¹	3
		18

<u>Second Semester</u>		<u>Credit Hrs.</u>
BIO-2330	Anatomy and Physiology I	4
DIET-1331	Fundamentals of Food Production	4
DIET-1580	Cost Control Procedures	1
DIET-1590	Purchasing Procedures	1
DIET-2301	Medical Nutrition Therapy I	3
HOSP-1020	Sanitation and Safety	2
		15

<u>Summer Semester</u>		<u>Credit Hrs.</u>
DIET-1850	Food and Nutrition Systems Practicum	4
		4

<u>Third Semester</u>		<u>Credit Hrs.</u>
DIET-1600	Introduction to Supervision	3
DIET-2311	Medical Nutrition Therapy II	3
DIET-2850	Medical Nutrition Care Practicum	2
PSY-1010	General Psychology ²	3
SPCH-1010	Fundamentals of Speech Communication	3
Arts & Hum/Soc & Beh Sci (see AAS Degree requirements) ¹⁻²		15 - 16

(Continued next page)

Dietetic Technology (Continued)

<u>Fourth Semester</u>		<u>Credit Hrs.</u>
DIET-2410	Life Cycle Nutrition - Pregnancy and Lactation	1
DIET-2420	Life Cycle Nutrition - Nutrition for Children ... OR	1
DIET-xxxx	DIET Elective course ³	2 - 3
DIET-2430	Life Cycle Nutrition - Nutrition through Adulthood	1
DIET-2501	Nutrition Applications in Long Term Care	2
DIET-2862	Geriatric Nutrition Practicum	2
DIET-2863	Community Nutrition Practicum	2
DIET-2990	Dietetic Technology Professional Development Skills C	2
PSY-2xxx	Any 2000-level PSY elective course	<u>3 - 4</u> 14 - 17
PROGRAM TOTAL		66 - 70

¹Any higher level MATH course may also be used to meet this requirement except MATH-1800/2800 & 1820/2820.

²Minimum 8 semester credits of Arts & Hum/Soc & Beh Sci required--must include PSY-1010 & 2000-level PSY course.

³DIET-2420 Life Cycle Nutrition - Nutrition for Children is highly recommended. Another course may be selected with written departmental approval.

Note: Courses as listed satisfy degree competencies and skills.

C = Capstone course.

ELECTRICAL/ELECTRONIC ENGINEERING TECHNOLOGY

Associate of Applied Science Degree in Electrical Engineering Technology.

The ever-changing and increasing field of Electronic Technology is expanding the need for highly trained electronic technicians. These electronic technicians assist engineers and scientists in various electronic environments such as electronic instrumentation and control, aerospace research, electronic communications, process control, robotics and computer repair. Students completing the program gain the theoretical knowledge and skills to be successful in these various electronic fields. Transferable to certain universities under the 2+2 program.

<u>Suggested Semester Sequence</u>		<u>Credit Hrs.</u>
<u>First Semester</u>		
EET-1110	DC Electric Circuits	3
EET-1240	Digital Circuits/Microprocessors I	3
EET-1140	Productivity Tools for Engineering	2
ENG-1010	College Composition I	3
MATH-1160	Technical Mathematics I ... OR	4
MATH-1610	Calculus I	5
MIT-1100	Computer Applications and Programming	<u>2</u> 17 - 18
<u>Second Semester</u>		
EET-1210	AC Electric Circuits	3
EET-2140	Digital Circuits/Microprocessors II	3
MATH-1360	Technical Mathematics II ... OR	5
MATH-1620	Calculus II	5
PHYS-1210	College Physics I	4
Arts & Hum/Soc & Beh Sci	(see AAS Degree requirements)	2
SPCH-1000	Fundamentals of Interpersonal Communication	<u>3</u> 20
<u>Third Semester</u>		
EET-2111	Industrial Electronics I	3
EET-2120	Electronics I	3
EET-2170	Signal Analysis	3
EET-2241	Microprocessor and Hardware Interfacing with C Programming	3
ENG-2151	Technical Writing	3
PHYS-1220	College Physics II	<u>4</u> 19
<u>Fourth Semester</u>		
EET-2500	Instrumentation and Control ... OR	3
EET-xxxx	EET elective course	3
EET-2290	Electrical Design Project	2
EET-2520	Programmable Logic Controllers	3
EET-2220	Electronics II	3
EET-2150	Printed Circuit Layout	1
EET-2160	Surface Mount Soldering	1
PSY-1050	Introduction to Industrial/Organizational Psychology	<u>3</u> 16
PROGRAM TOTAL		72 - 73

ELECTRONEURODIAGNOSTIC TECHNOLOGY

Associate of Applied Science Degree in Electroneurodiagnostic Technology

The Associate of Applied Science Degree prepares the student for an entry-level position as an Electroneurodiagnostic Technician for employment in hospitals, doctors' offices, and clinics. Electroneurodiagnostic technology is a profession devoted to the recording and study of electrical activity of the brain and nervous system. Used for medical evaluation and research, it includes procedures that assess the function of the nervous system. Technologists record electrical activity arising primarily from the brain, spinal cord, and peripheral nerves. This program consists of on-campus didactic and laboratory instruction, as well as off-campus clinical experiences at our affiliated health care institutions.

<u>Suggested Semester Sequence</u>		<u>Credit Hrs.</u>
<u>First Semester</u>		
BIO-1100	Introduction to Biological Chemistry ¹	3
BIO-2330	Anatomy and Physiology I	4
END-1300	Introduction to Electroneurodiagnostic Technology	2
END-1350	Introduction to Electroencephalography (EEG)	3
MATH-1141	Applied Algebra and Mathematical Reasoning ² <u>3</u>	<u>15</u>
<u>Second Semester</u>		<u>Credit Hrs.</u>
BIO-2340	Anatomy and Physiology II	4
END-1450	Intermediate Electroencephalography (EEG)	3
END-1500	Basic Evoked Potentials	3
END-1910	END Directed Practice I	4
ENG-1010	College Composition I	<u>3</u>
		17
<u>Summer Semester</u>		<u>Credit Hrs.</u>
END-2300	Nerve Conduction Studies	3
END-2910	END Directed Practice II	4
PHIL-2050	Bioethics ³	3
END-2411	Neurophysiology of Electroencephalography/ Sleep Disorders	3
Arts & Hum/Soc & Beh Sci (see AAS Degree requirements)		2
Communication...(See AAS Degree requirements)		<u>3</u>
		18
<u>Third Semester</u>		<u>Credit Hrs.</u>
END-2350	Fundamentals of Polysomnography ...OR	4
END-xxxx	Any END elective course ⁴	4
END-2400	Intraoperative Monitoring for Electroneurodiagnostic Technologists	2
END-2920	END Directed Practice III	4
Arts & Hum/Soc & Beh Sci (see AAS Degree requirements)		<u>3</u>
		13
<u>Fourth Semester</u>		<u>Credit Hrs.</u>
END-2450	Neonatal/Pediatric Electroneurodiagnostic	3
END-2930	END Directed Practice IV	2
END-2990	Electroneurodiagnostic Capstone C	<u>1</u>
		6
 PROGRAM TOTAL		 69

¹CHEM-1010 and 1020 may be taken in place of BIO-1100.

²Any higher level MATH course may also be used to meet this requirement except MATH-1800/2800 & 1820/2820.

³Minimum 8 semester credits of Arts & Hum/Soc & Beh Sci required--must include PHIL-2050.

⁴Directed practice courses may not be used to meet this requirement. Elective END course may be selected with written approval from the END department.

Note: Courses as listed satisfy degree competencies and skills.

C = Capstone course.

EMERGENCY MEDICAL TECHNOLOGY

Associate of Applied Science Degree in Emergency Medical Technology

This program is designed for individuals providing emergency medical service to the community. Three levels of training are available: EMT-B, EMT-P and Associate of Applied Science Degree in Emergency Medical Technology. Certification is provided by the Ohio Dept. of Public Safety, Division of EMS. The graduate may function on the levels required by Ohio Law to provide basic and advanced life support under the direction of a physician, as well as to provide supervision of operations in an emergency service. Accreditation number: 312 OH.

Suggested Semester Sequence		<u>Credit Hrs.</u>
<u>First Semester</u>		
BIO-1100	Introduction to Biological Chemistry	3
BIO-2330	Anatomy and Physiology I	4
EMT-1301	Emergency Medical Technician - Basic	7
ENG-1010	College Composition I	<u>3</u>
		17
<u>Second Semester</u>		
BIO-2340	Anatomy and Physiology II	4
EMT-1320	Heavy Rescue OR	2
EMT-xxxx	EMT elective course ¹	2
EMT-1340	Emergency Medical Services Communications	1
MATH-1060	Survey of Mathematics ²	3
MA-1020	Medical Terminology I	3
Communication...(See AAS Degree requirements)		<u>3</u>
		16
<u>Third Semester</u>		
EMT-2330	Paramedic Theory I ³	6
EMT-2340	Paramedic Theory II ³	6
Arts & Hum/Soc & Beh Sci (see AAS Degree requirements)		3
Arts & Hum/Soc & Beh Sci (see AAS Degree requirements)		<u>2</u>
		17
<u>Fourth Semester</u>		
EMT-2000	Instructional Techniques - EMT C	2
EMT-2350	Paramedic Theory III ³	6
EMT-2360	Paramedic Theory IV ³	6
Arts & Hum/Soc & Beh Sci (see AAS Degree requirements)		<u>3</u>
		17
<u>Summer Semester</u>		
EMT-2010	Emergency Medical Technology Management	2
EMT-2740	Advanced Paramedic Techniques	<u>4</u>
		6
PROGRAM TOTAL		73

¹Elective course may be selected with written approval from the EMT department.

²Any higher level MATH course may also be used to meet this requirement except MATH-1800/2800 & 1820/2820.

³Flexibly scheduled 8 week session.

Note: Courses as listed satisfy degree competencies and skills.

C = Capstone course.

INTEGRATED SYSTEMS ENGINEERING TECHNOLOGY

Associate of Applied Science Degree in Integrated Systems Engineering Technology.

Pending approval by the Ohio Board of Regents

The Integrated Systems Engineering Technology Program prepares students to diagnose and resolve industrial equipment problems using good technical assessment skills and core electrical skills. The program also provides students with a base knowledge in advanced skills such as programmable logic controllers (PLC's) electronics and digital applications, robotics, and process controls. Students completing the Integrated Systems Engineering Technology program will find jobs as instrument control technicians, maintenance repair technicians, electrical maintenance technicians, power plant control room operators, or integrated systems technicians.

Suggested Semester Sequence		<u>Credit Hrs.</u>
<u>First Semester</u>		
ISET-1300	Mechanical/Electrical Print Reading	2
ISET-1310	Mechanical Power Transmission	2
ISET-1410	Applied Electricity I	3
ENG-1010	College Composition I	3
MATH-1160	Technical Mathematics I	4
ISET-1450	Heating Ventilation Air Conditioning/Refrigeration I (b)	<u>2</u>
		14-16
<u>Second Semester</u>		
BADM-2010	Business Communications	3
IT-1010	Introduction to Microcomputer Applications	3
ISET-1320	Fundamentals of Fluid Power (a) OR	2
ISET-1460	Fundamental Boiler Technology (b)	3
ISET-1340	Industrial Piping and Tubing	2
ISET-1420	Applied Electricity II	3
Arts & Hum/Soc & Beh Sci (see AAS Degree requirements)		<u>3</u>
		16 - 17
<u>Summer Semester</u>		
ISET-2200	Industrial Motor Controls	3
SPCH-1000	Fundamentals of Interpersonal Communication	<u>3</u>
		6
<u>Third Semester</u>		
ISET-2500	Programmable Logic Controllers Maintenance I	3
ISET-2210	Commercial Wiring	3
MET-2300	Fluid Power (a) OR	3
ISET-2450	Heating Ventilation Air Conditioning/Refrigeration II (b)	2
ENG-2151	Technical Writing I	3
BADM-1050	Professional Success Strategy	<u>3</u>
		14 - 15

(Continued next page)

Integrated Systems Engineering Technology (Continued)

<u>Fourth Semester</u>		<u>Credit Hrs.</u>
ISET-2220	Fundamentals of Electronics and Instrumentation	3
ISET-2510	Programmable Logic Controllers Maintenance II ¹ (a) AND	2
ISET-2520	Programmable Logic Controllers Maintenance III ¹ (a) OR	2
ISET-2460	Applied Boiler Technology (b)	2
ISET-2240	Applied National Electric Code	3
ISET-2990	Reliability Centered Maintenance C	3
Arts & Hum/Soc & Beh Sci (see AAS Degree requirements)		<u>2</u>
		13 - 15
PROGRAM TOTAL		66
Program Total for Option a=66 credits		
Program Total for Option b=66 credits		

¹Flexibly Scheduled 8 week course.

Letters in parenthesis relate to Options (a) Integrated Systems Maintenance and (b)Environmental Systems Maintenance.

C = Capstone course.

<u>Option (a) - Integrated Systems Maintenance</u>		<u>Credit Hours</u>
ISET-1320	Fundamentals of Fluid Power	2
ISET-2510	Programmable Logic Controllers Maintenance II	2
ISET-2520	Programmable Logic Controllers Maintenance III	2
MET-2300	Fluid Power	<u>3</u>
		9
<u>Option (b) Environmental Systems Maintenance</u>		<u>Credit Hours</u>
ISET-1450	Heating Ventilation Air Conditioning/Refrigeration I	2
ISET-1460	Fundamental Boiler Technology	3
ISET-2450	Heating Ventilation Air Condition Refrigeration II	2
ISET-2460	Applied Boiler Technology	<u>2</u>
		9

INTERIOR DESIGN

Associate of Applied Business Degree in Interior Design

The interior designer helps to solve the functional and aesthetic design problems in residential and commercial interiors. The program prepares students for employment in interior design studios, architectural firms, showrooms, retail and furniture stores and manufacturing firms.

Suggested Semester Sequence

<u>First Semester</u>		<u>Credit Hrs.</u>
ARCH-1410	Architectural Drafting and CAD I	3
ART-2020	Art History Survey: Prehistoric to Renaissance	3
ART-1050	Drawing I	3
ART-1080	Visual Design I	3
ENG-1010	College Composition I	3
INTD-1110	Introduction to Interior Design	1
MIT-1220	Introduction to AutoCAD	<u>2</u>
		18

<u>Second Semester</u>		<u>Credit Hrs.</u>
ART-2030	Art History Survey: Late Renaissance to Present	3
ART-1060	Drawing II	3
ART-1090	Visual Design II	3
ENG-1020	College Composition II OR	3
SPCH-1000	Fundamentals of Interpersonal Communication	3
MATH-xxxx	1000-level MATH course or higher ¹	<u>3</u>
		15

<u>Third Semester</u>		<u>Credit Hrs.</u>
INTD-2300	Interior Design Studio I	3
INTD-2320	History of Interiors	3
INTD-2330	Interior Design Materials and Sources	3
INTD-2350	Textiles	3
INTD-2380	Fundamentals of Lighting	3
MARK-2020	Principles of Salesmanship	<u>3</u>
		18

<u>Fourth Semester</u>		<u>Credit Hrs.</u>
INTD-2400	Interior Design Studio II	3
INTD-2430	Architectural Materials and Methods	3
INTD-2460	Interior Design Presentation	3
INTD-2470	Professional Practice of Interior Design	3
INTD-2850	Interior Design Practicum C	<u>3</u>
		15
PROGRAM TOTAL		66

¹Any higher level MATH course may also be used to meet this requirement except MATH-1800/2800 & 1820/2820.

Note: Courses as listed satisfy degree competencies and skills.

C = Capstone course.

OPTICAL TECHNOLOGY

Associate of Applied Science Degree in Optical Technology

A licensed optician can work in a retail outlet, optical laboratory or a doctor's office. Opticians with the appropriate educational background can move into management positions in a doctor's office, as well as retail outlets, or they can even establish their own business or purchase a franchise. Other career paths can lead to related work as a sales representative for optical products. For the person enthusiastic about the health care aspects of the field, advanced education can be pursued to become an Optometrist or Ophthalmologist.

Suggested Semester Sequence		<u>Credit Hrs.</u>
<u>First Semester</u>		
ENG-1010	College Composition I	3
OPT-1310	Theoretical Optics I	2
OPT-1410	Mechanical Optics I	2
OPT-1510	Optical Dispensing I	3
OPT-1610	Contact Lens I	2
PSY-1010	General Psychology ¹	3
		15
<u>Second Semester</u>		
MATH-1060	Survey of Mathematics ²	3
OPT-1320	Theoretical Optics II	2
OPT-1420	Mechanical Optics II	2
OPT-1520	Optical Dispensing II	3
OPT-1620	Contact Lens II	3
Communication...	(See AAS Degree requirements)	3
		16
<u>Summer Semester</u>		
IT-1010	Introduction to Microcomputer Applications	3
OPT-2500	Optical Business	2
PHYS-1300	Physics of Optical Materials	4
		9
<u>Third Semester</u>		
BIO-1230	Anatomy and Physiology of the Eye	4
OPT-2861	Optical Practicum I	3
OPT-2970	Optical Practicum Seminar I	3
OPT-2790	Lens Surfacing	3
Arts & Hum/Soc & Beh Sci	(see AAS Degree requirements)	3
		16
<u>Fourth Semester</u>		
OPT-2650	License Review Spectacle	1
OPT-2660	License Review Contact Lens	1
OPT-2670	Optical Development ... OR	2
OPT-xxxx	OPT elective course ³	2
OPT-2870	Optical Practicum II	3
OPT-2980	Optical Practicum Seminar II C	3
Arts & Hum/Soc & Beh Sci	(see AAS Degree requirements)	2
		12
PROGRAM TOTAL		68

¹Minimum 8 semester credits of Arts & Hum/Soc & Beh Sci required--must include PSY-1010 and 4 semester credits at the 2000-level.

²Any higher level MATH course may also be used to meet this requirement except MATH-1800/2800 & 1820/2820.

³Elective course may be selected with written approval of the OPT department.

Note: Courses as listed satisfy degree competencies and skills.

C = Capstone course.

PLANT SCIENCE & LANDSCAPE TECHNOLOGY (DESIGN/BUILD)

Associate of Applied Science degree in Plant Science and Landscape Technology with a concentration in Design/Build.

Pending approval by the Ohio Board of Regents. Projected to offer Fall 2007.

This ornamental horticulture program prepares the student for a career in landscape design. Landscape designers create landscape installation plans based on the client's needs, wants, and desires. Landscape designers find work for medium to large landscape contracting companies or may work independently creating designs the client can take to a contractor.

Suggested Semester Sequence		<u>Credit Hrs.</u>
<u>First Semester</u>		
HLTH-1230	Standard First Aid and Personal Safety	1
PST-1300	Horticultural Botany	3
MATH-1160	Technical Mathematics I	4
PST-1310	Landscape Plants I	3
PST-1410	Equipment Operations and Maintenance	3
PST-1430	Design I- Landscape Design & Construction Graphics	3
		17
<u>Second Semester</u>		
ENG-1010	College Composition I	3
IT-1010	Introduction to Microcomputer Applications	3
PST-1440	Design II: Introduction to Landscape Design	3
PST-1320	Landscape Plants II	3
PST-1420	Landscape Practices	3
PST-1500	Basic Landscape Contracting	3
		18
<u>Summer Semester</u>		
PST-2950	Field Experience	3
		3
<u>Third Semester</u>		
ECON-2620	Principles of Microeconomics	4
PSCI-1020	Chemistry	3
PSCI-102L	Chemistry Laboratory	1
PST-2200	Advanced Landscape Contracting	3
PST-2430	Design III - Planting Design	3
SPCH-1000	Fundamentals of Interpersonal Communication	3
		17
<u>Fourth Semester</u>		
BADM-1300	Small Business Management	4
PST-1600	Irrigation and Drainage	2
PST-2310	Soil Technology	3
PST-2440	Design IV - Advanced Landscape Design C	3
Arts Hum/Soc & Beh Sci	(see AAS Degree requirements) ¹	4
		16
PROGRAM TOTAL		71

¹Recommend SPAN-1010 Beginning Spanish I.

C = Capstone course.

PRACTICAL NURSING (CERTIFICATE)

Certificate of Proficiency in Practical Nursing


The Practical Nurse (under the direction of a physician, dentist, optometrist, podiatrist or registered nurse) works in a variety of settings including: clinics, home care, hospitals, long term care facilities and physicians' offices. The curriculum consists of 40 semester credit hours, divided among nursing and non nursing courses. The nursing courses consist of classroom activities, hospital and long term care experiences caring for patients of all ages with a variety of health deviations. Upon successful completion of the program requirements, graduates are eligible to take the National Council Licensure Examination for Practical Nurses. ACCESS in Nursing is available for graduates.

Misdemeanors and Felonies: The Ohio Board of Nursing frequently receives calls from prospective students, school officials, and the Bureau of Vocational Rehabilitation Services regarding whether the Board will permit a person who has a prior record of misdemeanors and/or felonies to sit for the licensure examination or become licensed. The Board of Nursing has no statutory authority to advise as to whether an individual will be permitted to take a licensure examination or be able to become licensed until the individual actually applies to the Board for licensure by examination (Ohio Board of Nursing [9/23/98]. Requirements for Section 5 of the Application for Licensure as a Nurse). Felony Preclusion Bill: The Felony Preclusion Bill, signed by the Governor April, 2002, is an initiative to identify applicants for licensure with felony convictions. The Ohio Board of Nursing has the authority in this law to refuse to grant licensure to applicants with any of the felony convictions specified in the law. The egregious felonies listed in the bill include: aggravated murder; murder; voluntary manslaughter; felonious assault; kidnapping; rape; sexual battery; gross sexual imposition; aggravated arson; aggravated robbery; and aggravated burglary. The law requires a criminal records check for new applicants for licensure.

Suggested Semester Sequence		<u>Credit Hrs.</u>
<u>First Semester</u>		
BIO-1100	Introduction to Biological Chemistry ¹	3
ENG-1010	College Composition I	3
MATH-1141	Applied Algebra and Mathematical Reasoning ²	3
PNUR-1310	Fundamentals of Nursing	4
PNUR-1320	Nursing Management of Adults I	4
		17
<u>Second Semester</u>		
BIO-2330	Anatomy and Physiology I	4
PNUR-1330	Nursing Management of Adults II	8
PSY-1010	General Psychology	3
		15
<u>Third Semester</u>		
PNUR-1340	Nursing Care of Families	4
PSY-2020	Life Span Development	4
		8
PROGRAM TOTAL		40

¹CHEM-1010 and CHEM-1020 replace BIO-1100 for students planning to transfer credits.

²Any higher level MATH course may also be used to meet this requirement except MATH-1800/2800 & 1820/2820.

 = Capstone course.

VISUAL COMMUNICATIONS & DESIGN (DIGITAL VIDEO AND DIGITAL FILMMAKING)

Associate of Applied Business in Visual Communication and Design with a concentration in Digital Video

The goal of the Digital Video and Digital Filmmaking Degree Program is to prepare our graduates for a rewarding career in digital video and digital filmmaking. Possible career paths include television production, short and feature filmmaking, editorial, special effects/visual effects production, on-line video content creation and distribution, and DVD production and design. The curriculum is based on professional standards drawn from the practices of advertising agencies, design studios, media and independent production companies and in-house or corporate media departments.

Suggested Semester Sequence		<u>Credit Hrs.</u>
<u>First Semester</u>		
ENG-1010	College Composition I	3
MATH-xxxx	1000-level MATH course or higher	3
VC&D-1010	Macintosh Basics	1
VC&D-1110	Introduction to Visual Communications ...OR	2
VC&D-1100	Fundamentals of Design and Layout	2
VCDP-1360	Vector Graphics ...OR	2
VC&D-1300	Graphic Design Drawing ... AND	1
VC&D-130L	Graphic Design Drawing Studio	1
VCSI-1350	Basic Photography for Scientific Imaging ...OR	3
VCPH-1050	Black and White Photography I	3
VCDV-1180	Introduction to Digital Video and Digital Filmmaking	3
		17
<u>Second Semester</u>		
JMC-1011	Introduction to Mass Communication	4
VCDV-2180	Digital Cinematography	3
VC&D-1200	Typography and Layout	3
JMC-1310	Film Appreciation	3
VCPH-1450	Digital Imaging I ... OR	3
VC&D-1400	Imaging and Design ... AND	1
VC&D-140L	Imaging and Design Studio	1
		15 - 16
<u>Third Semester</u>		
VCDV-2280	Advanced Digital Video and Digital Filmmaking: Exploring Genre and Technique	3
VCDV-2xxx	VCDV Elective	3
VCIM-2270	Animation for the Web and Media	3
BADM-1020	Introduction to Business	3
Arts & Hum/Soc & Beh Sci	(see AAB Degree requirements) ¹	2
RAT-1300	Introduction to Recording	3
		17

(Continued next page)

**Visual Communications & Design
(Digital Video And Digital Filmmaking)
(Continued)**

<u>Fourth Semester</u>	<u>Credit Hrs.</u>
MARK-2010 Principles of Marketing	3
VC&D-2530 Professional Practice in Visual Communication and Design	3
VC&D-2990 Portfolio Preparation C	2
VCDV-2580 Digital Versatile Disk (DVD) Authoring and Design	3
VCXX-xxxx Visual Communications & Design Elective	2 - 3
Arts & Hum/Soc & Beh Sci (see AAS Degree requirements)	<u>2</u>
	15 - 16
PROGRAM TOTAL	64 - 66

¹Minimum of 8 credits of Art and Hum/Soc & Beh Sci. required.

C = Capstone course.

Recommended Arts & Hum/Soc & Behavioral Science Courses

It is highly recommended that students select from the following courses to fulfill the Arts & Hum/Soc & Beh Sci degree requirements:

	<u>Credit Hours</u>
ART-1040 Survey of Non-Western Art	3
ART-1050 Drawing I	3
ART-2020 Art History Survey: Prehistoric to Renaissance	3
JMC-2410 Television Production	3
JMC-2470 Motion Picture Production	3

Technical Electives

To fulfill the technical elective requirement for any 2000 level VCDV class (VCDV-2xxxx), students must choose from the following options:

VCDV-2380 Visual Effects Compositing for Digital Video	3
VCDV-2480 Motion Graphics for Digital Video	3

COURSE DESCRIPTIONS

APPLIED INDUSTRIAL TECHNOLOGY (CARPENTRY) - ATCT

ATCT-2330 Trade Show 02 Semester Credit

Installation and dismantling of trade show exhibits. Includes techniques and procedures, aerial lift, welded frame/mobile tower scaffold erector, and rigging.

Lecture 02 hours. Laboratory 00 hours.

Prerequisite(s): ATCT-2330 Trade Show, and departmental approval: admission to any Applied Industrial Technology program.

ATCT-2560 Interior Systems III 02 Semester Credit

In depth study of interior systems including barrel and dome ceilings and commercial door hardware used in the construction industry. Topics include use of specific tools and machining techniques required to install doors and door hardware, frames, exit devices, and associated items. Applicable math concepts, door and hardware schedules; and safety practices as prescribed by OSHA also included. Extensive guided instruction and practice provided.

Lecture 02 hours. Laboratory 00 hours.

Prerequisite(s): ATCT-2360 Interior Systems II or departmental approval.

APPLIED INDUSTRIAL TECHNOLOGY (PILE DRIVING) - ATPD

ATPD-1310 Technical Measurements, Hand & Power Tool Use in Pile Driving 02 Semester Credit

Introduction of safe use of pile driving tools. Topics include measurements, tool groups and tool applications.

Lecture 02 hours. Laboratory 00 hours.

Prerequisite(s): ATCT-1300 Carpentry I, and departmental approval: admission to Carpenter Apprentice program.

ATPD-1330 Print Reading for Pile Driving 02 Semester Credit

Introduction to blue print reading as it pertains to the Pile Driver. In depth discussion on line types, scale, views, and revision information. Use of optical tooling for layout also included.

Lecture 02 hours. Laboratory 00 hours.

Prerequisite(s): ATCT-1300 Carpentry I, and departmental approval: admission to Carpenter Apprentice Program.

ATPD-1370 Pile Driving on Land and Water 02 Semester Credit

Introduction to basic pile types and applications. Topics include recognition and use of different types of hammers, pile families designs, structural characteristics, pile driving leads, required equipment and accessories, and pile driving on land and water.

Lecture 02 hours. Laboratory 00 hours.

Prerequisite(s): ATCT-1300 Carpentry I, and departmental approval: admission to Carpenter Apprentice program.

ATPD-2020 Pile Driving Technologies 02 Semester Credit

Advanced study of set up and breakdown of various cranes and equipment types. Includes identification of crane types, hardware & hitch usage, signals, and equipment capacities.

Lecture 02 hours. Laboratory 00 hours.

Prerequisite(s): ATCT-1300 Carpentry I, and departmental approval: admission to Carpenter Apprentice program.

ATPD-2220 False Work and Heavy Timber 02 Semester Credit

Efficient uses, advantages, disadvantages, and special considerations related to shoring methods. Examples of types of shoring equipment shown. Matching most efficient shoring system to application is also included.

Lecture 02 hours. Laboratory 00 hours.

Prerequisite(s): ATCT-1300 Carpentry I, and departmental approval: admission to Carpenter Apprentice program.

ATPD-2370 Advanced Pile Driving on Land 02 Semester Credit

In depth study of pile driving. Includes caissons and drilled shafts, tie back walls, cofferdams and cells, shoring and lagging, and fundamentals of geo-technical engineering and soil.

Lecture 02 hours. Laboratory 00 hours.

Prerequisite(s): ATCT-1300 Carpentry I, and departmental approval: admission to Carpenter Apprentice program.

ATPD-2380 Advanced Pile Driving on Water 02 Semester Credit

In depth study of pile driving on water. Topics include sheet pile and caissons, auger cast pile, cofferdams, stone setting, and extraction.

Lecture 02 hours. Laboratory 00 hours.

Prerequisite(s): ATCT-1300 Carpentry I, and departmental approval: admission to Carpenter Apprentice program.

ATPD-2700 Millwright-Pile Driver Weld IV

02 Semester Credit

Reinforcement of necessary skills required for large multi-pass welds. Preparation for A.W.S. D1.5 vertical up unlimited thickness certification test. Includes in-depth review of blueprint reading for welders.

Lecture 02 hours. Laboratory 00 hours.

Prerequisite(s): ATPD-2520 Millwright Pile Driver Weld III, and departmental approval: admission to Carpenter Apprentice program.

ATPD-2710 Millwright-Pile Driver Weld V

02 Semester Credit

Advanced welding practices as applied to pile driving. GMAW topics include innershield welding, safe set up and use of wire fed welding machines.

Lecture 02 hours. Laboratory 00 hours.

Prerequisite(s): ATPD-2700 Millwright-Pile Driver Weld IV, and departmental approval: admission to Carpenter Apprentice program.

ART - ART

ART-1010 Art Appreciation

03 Semester Credit

Introduction to the nature, vocabulary, media, and history of art as well as an examination of art's themes and purposes, visual elements, and principles of design.

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): Eligibility for ENG-1010 College Composition I.

ART-1600 Introduction to Art Therapy

03 Semester Credit

Introduction to basic concepts of art as therapy, provide an overview of the origins, theories, and foundations of art therapy. Students will be exposed to a variety of art media and major readings in the field utilizing art as a means of communication. Artistic talent is not required for this course.

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): None.

ART-1700 Ceramics I

03 Semester Credit

Fundamentals of basic hand building methods, glazing and decorative techniques by creating forms of increasing complexity. Broad survey of ceramic history.

Lecture 01 hour. Laboratory 05 hours.

Prerequisite(s): None.

ART-1710 Ceramics II

03 Semester Credit

Wheel throwing skills and advanced hand building techniques in the creation of three-dimensional forms. Introduction to kiln firing and ceramic materials in clay and glaze formulation. May be repeated for up to 9 credits, 3 of which are applicable to degree requirements.

Lecture 01 hour. Laboratory 05 hours.

Prerequisite(s): ART-1700 Ceramics I, or departmental approval: comparable skills.

ART-2000 Life Drawing I

03 Semester Credit

Introduction to drawing the human figure from a live model. Emphasis is on gesture drawing to accurately establish the proportion and pose of the figure. The elements of line and value are used to describe form, structure and space. Anatomy for artists is introduced. Various media are explored.

Lecture 01 hour. Laboratory 05 hours.

Prerequisite(s): ART-1050 Drawing I, or departmental approval: comparable skills.

ART-2010 Life Drawing II

03 Semester Credit

Continued exploration of drawing the human figure from a live model. Emphasizes anatomy lessons to portray human structure and to explore the figure's expressive nature. Craftsmanship and proficiency with various media are stressed. Control of gesture and proportion, and the representation of foreshortened forms within a three-dimensional environment will be examined. May be repeated for up to 9 credits: only 3 credits may be applied to degree requirements.

Lecture 01 hour. Laboratory 05 hours.

Prerequisite(s): ART-2000 Life Drawing I, or departmental approval: comparable skills.

ART-2020 Art History Survey: Prehistoric to Renaissance
03 Semester Credit

A stylistic and historical overview of the visual arts in western culture from inception to the fifteenth century including: Prehistoric, Egyptian, Ancient Near Eastern, Greek, Etruscan, Roman, Byzantine, Early Medieval Monastic, Carolingian and Ottonian, Romanesque, Gothic, Fourteenth-Century Art in Italy, Fifteenth-Century Art in Northern Europe and Spain, and the Early Renaissance in Italy.

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): ENG-1010 College Composition I, or concurrent enrollment.

Course Descriptions

ART-2030 Art History Survey: Late Renaissance to Present

03 Semester Credit

A stylistic and historical overview of the visual arts in western culture from the sixteenth century through today including Italian Renaissance, Mannerism, Sixteenth Century Art in Northern Europe and Spain, Baroque and Rococo, Neoclassicism and Romanticism, Nineteenth, Twentieth, and Twenty-First Centuries Art in Europe and the United States.

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): ENG-1010 College Composition I.

ART-2210 Printmaking I

03 Semester Credit

Introduction to various aspects of printmaking and graphic composition. Techniques include relief printing (wood/linocut, monotype); intaglio (etching, engraving, dry point, mezzotint, aquatint); collagraphy, monoprint and multi-color work.

Lecture 01 hour. Laboratory 05 hours.

Prerequisite(s): ART-1050 Drawing I, or departmental approval.

ART-2220 Printmaking II

03 Semester Credit

Continuation of advanced printmaking techniques such as intaglio, relief, lithography, serigraphy, collagraphy and/or monoprints. May be repeated for up to 9 credits, 3 of which are applicable to degree requirements.

Lecture 01 hour. Laboratory 05 hours.

Prerequisite(s): ART-2210 Printmaking I, or departmental approval: comparable skills.

Deleted Courses

ART-1020 Art History I (replaced by ART-2020)

ART-1030 Art History II (replaced by ART-2030)

AUTOMOTIVE TECHNOLOGY - AUTO

AUTO-1300 Automotive Engines

03 Semester Credit

Operation of internal combustion gasoline engine including engine fundamentals and removal, lubrication and cooling system operation, and cylinder head and engine block diagnosis. Engine disassembly, measurements for correctness, proper assembly techniques and gasket and sealing information included. Modular courses AUTO-130A, AUTO-130B, and AUTO-130C together will also meet degree requirements for this course.

Lecture 01 hour. Laboratory 06 hours.

Prerequisite(s): None.

AUTO-2350 Automotive HVAC

02 Semester Credit

Theory, diagnosis and servicing procedures of automotive air conditioning systems. Includes heating systems and operation, diagnosis and repair of electric and vacuum components and controls, and service procedures for R-12 and R-134A refrigerants. Modular courses AUTO-235A and AUTO-235B together will also meet degree requirements for this course.

Lecture 01 hour. Laboratory 03 hours.

Prerequisite(s): AUTO-1501 Automotive Electrical Fundamentals; or AUTO-150A Automotive Electrical Fundamentals: Principles, and AUTO-150B Automotive Electrical Fundamentals: Laboratory Competencies; or departmental approval: industry-related experience.

AUTO-2400 Engine Performance

03 Semester Credit

Fundamentals of proper engine performance. Ignition, electrical, engine mechanical, and fuel and emission system principles of operation, related driveability symptoms, and proper testing to verify cause will be explored. DVOM, scan tool and special tools used throughout course. Emphasis on operational concepts and individual component testing. Modular courses AUTO-240A, AUTO-240B, and AUTO-240C together will also meet degree requirements for this course.

Lecture 01 hour. Laboratory 06 hours.

Prerequisite(s): AUTO-1501 Automotive Electrical Fundamentals; or AUTO-150A Automotive Electrical Fundamentals: Principles and AUTO-150B Automotive Electrical Fundamentals: Laboratory Competencies, or departmental approval: industry-related experience.

AUTO-2450 Automotive Electronic Engine Controls

03 Semester Credit

Operation and advanced diagnosis of modern automobile ignition, electrical, engine mechanical, and fuel and emission control systems which are computer controlled. Explore methods of analyzing and locating engine performance malfunctions using deductive methodology and diagnostic test equipment. Emphasis on OBD II software, in-depth scan tool usage, five-gas analysis, and digital scope signal analysis. Modular courses AUTO-245A, AUTO-245B, and AUTO-245C together will also meet degree requirements for this course.

Lecture 01 hour. Laboratory 06 hours.

Prerequisite(s): AUTO-2400 Engine Performance; or AUTO-240A Engine Performance: Principles, and AUTO-240B Engine Performance: Laboratory Competencies, and AUTO-240C Engine Performance: Advanced Laboratory Competencies; or departmental approval: industry-related experience.

BUSINESS ADMINISTRATION - BADM**BADM-1030 Introduction to Industrial Distribution
03 Semester Credit**

Comprehensive survey of industrial distribution. Description, definition and analysis of organizational structure, roles, career ladders and the value of the industrial distributor to the supply chain along with related processes. Effective communication using industrial distribution terminology and application of profit and pricing calculations.

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): BADM-1020 Introduction to Business.

**BADM-1040 Principles & Practices of Customer Service
03 Semester Credit**

How to create customer satisfaction and loyalty: developing and using questions, building rapport, using conflict resolution techniques, making basic business calculations and using business decision-making model to convey information and solve customer problems.

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): None.

**BADM-1050 Professional Success Strategy
03 Semester Credit**

Apply knowledge of the corporate environment, diversity, ethics, teamwork and professionalism to manage interpersonal challenges and maximize relationships. Facilitate a meeting, set goals, use a time management system and effective verbal and written communications.

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): None.

**BADM-2490 Industrial Distribution Strategy and Application
03 Semester Credit**

Capstone course for Industrial Distribution program. Completion of customer sales transactions and application of communication, negotiation and interpersonal skills, problem-solving and conflict management techniques. Recognition of legal and regulatory ramifications. Analysis and recommended resolution of complex ethical dilemmas found in the industrial distribution environment.

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): EET-1120 Survey of Engineering, and BADM-1030 Introduction to Industrial Distribution, and BADM-1040 Principles & Practices of Customer Service, or departmental approval.

CHEMISTRY - CHEM**CHEM-1020 Introduction to Organic Chemistry and Biochemistry
04 Semester Credit**

Structure and properties of representative carbon compounds and applications to everyday life. Nature and metabolism of biochemical compounds and relationship of nucleic acids to protein synthesis.

Lecture 03 hours. Laboratory 03 hours.

Prerequisite(s): CHEM-1010 Introduction to Inorganic Chemistry (or BIO-1100 Introduction to Biological Chemistry, and sufficient score on the Chemistry assessment test; and MATH-0960 Beginning Algebra II, or MATH-0980 Intensified Beginning Algebra or eligibility for MATH-1141); or departmental approval: equivalent knowledge or skills.

DENTAL HYGIENE - DENT**DENT-1300 Preventive Oral Health Services I
04 Semester Credit**

Introduction to dental hygiene practice including professionalism, infection control, medical history, vital signs, oral inspection, preventive oral health, oral accretions, technique for the oral prophylaxis and medical emergencies.

Lecture 02 hours. Laboratory 06 hours.

Prerequisite(s): Departmental approval: admission to program.

**DENT-1400 Preventive Oral Health Services II
05 Semester Credit**

Implementation of preventative oral health. Students provide oral health treatments to clients in the dental hygiene clinic. Topics include the special needs of patients with oral rehabilitation, pain management, geriatric concerns, oral cancer, handicaps, mental disorders, cardiovascular disease and diabetes.

Lecture 01 hour. Laboratory 12 hours.

Prerequisite(s): DENT-1300 Preventive Oral Health Services I.

**DENT-2400 Preventive Oral Health Services IV
05 Semester Credit**

Continuation of clinical experience integrating social and basic sciences within the scope of dental hygiene practice. Emphasis on professionalism, time management, and advanced Dental Hygiene Techniques. Incorporation of nutritional counseling procedures.

Lecture 01 hour. Laboratory 12 hours.

Prerequisite(s): DENT-2300 Preventive Oral Health Services III and DIET-1220 Nutrition for Dental Hygiene.

Course Descriptions

DENT-2990 Dental Hygiene Practice

01 Semester Credit

Capstone course in Dental Hygiene. Application of the ADHA Code of Ethics, healthcare laws, and standards of professional responsibility to evaluate current dental hygiene issues using evidence-based methods within scope of practice; usage of software that supports the delivery of oral health protocol; development of a plan to acquire and maintain a dental hygiene license; preparation for employment.

Lecture 01 hour. Laboratory 00 hours.

Prerequisite(s): DENT-2300 Preventive Oral Health Services III.

Deleted Course

DENT-2430 Dental Hygiene Practice (equivalent to DENT-2990)

DIETETIC TECHNOLOGY-DIET

Deleted Course

DIET-1300 Principles of Nutrition (equivalent to DIET-1200 and DIET-1320)

EARLY CHILDHOOD EDUCATION - ECED

ECED-2500 Infant/Toddler Development, Relationships, and Programs

03 Semester Credit

Comprehensive coverage of broad areas of infant and toddler development and care with special emphasis on developmentally appropriate practices for adults who work with children ages birth to three. Major developmental milestones in infant and toddler growth; creation of safe, healthy, and supportive learning environments for children under three. Selection of materials and equipment for center or home-based care; analysis of professional standards for high quality interactions between adults and very young children.

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): ENG-1010 College Composition I, and ECED-1010 Introduction to Early Childhood Education: Children's Development and Programs; or ECED-101A Children's Development and Types of Programs in Early Childhood, and ECED-101B Theoretical Foundations of Early Childhood, and ECED-101C Curriculum and Inclusion in Early Childhood, and ECED-101D Early Childhood Curriculum in the Classroom.

ECONOMICS - ECON

ECON-2610 Principles of Macroeconomics

04 Semester Credit

Non-sequential course which introduces language, tools, methods and topics of economic analysis. Study of broad economy including measurement and analysis of economic activity, government and its roles in a market system, the banking system, monetary policy, economic growth and international economics.

Lecture 04 hours. Laboratory 00 hours.

Prerequisite(s): None: (BADM-1020 Introduction to Business is recommended.)

EDUCATION - EDUC

EDUC-1011 Introduction to Education

03 Semester Credit

Designed to introduce the student to the broad and complex field of public education. Emphasis on personal and professional characteristics required for successful teaching. This course also requires 18 hours of field observation in primary and/or secondary school classrooms within the term.

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): Eligibility for ENG-1010 College Composition I.

EDUC-1020 Educational Technology

03 Semester Credit

Identify, select, evaluate, use, and troubleshoot instructional technology, electronic media, operating and utility software to meet curricular goals. Use instructional design and integration strategies to design and produce developmentally and culturally appropriate materials that align with PRAXIS II and INTASC/Ohio standards..

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): None.

ELECTRICAL/ELECTRONIC ENGINEERING TECHNOLOGY - EET

EET-1120 Survey of Engineering

04 Semester Credit

Identification and application of fundamental principles of mechanical power transmission, fluid power (hydraulic & pneumatic), electrical, instrumentation, and maintenance procedures. Interpretation of schematic diagrams for mechanical and electrical systems and the use of basic questions and flowcharts to troubleshoot and solve problems or identify additional resources needed.

Lecture 04 hours. Laboratory 00 hours.

Prerequisite(s): None.

EET-1140 Productivity Tools for Engineering

02 Semester Credit

Productivity Tools for Engineering exposes the students to word processing, spread sheets and CAD (Computer Aided Design) programs directed at the electronic engineering technology environment.

Lecture 00 hour. Laboratory 04 hours.

Prerequisite(s): ENG-1010 College Composition I or concurrent enrollment.

EET-1210 AC Electric Circuits

03 Semester Credit

Fundamentals of alternating current (AC) circuits involving resistance, capacitance, and inductance. Sinusoidal voltage, current power, phase, resonance, and frequency response of basic circuit elements in series, parallel, and series-parallel connections as analyzed using Kirchhoff's laws, Mesh, Nodal, and Bridge Network analysis, Delta-Wye conversions, Superposition, Thevenin's, Norton's and Maximum Power Transfer theorems. Decibels, filters, Bode plots, Fourier series, polyphase transformers, and system analysis are studied. Computer simulation and practical laboratory experience using AC instrumentation for measuring series-parallel networks to observe and verify theory and concepts presented during lectures.

Lecture 02 hours. Laboratory 02 hours.

Prerequisite(s): EET-1110 DC Electric Circuits, MIT-1100 Computer Applications and Programming; and MATH-1160 Technical Mathematics I, or MATH-1610 Calculus I.

EET-1240 Digital Circuits/Microprocessors I

03 Semester Credit

Introduction to binary number system and to all logic gates used in digital circuits. Boolean algebra, logic gate equivalents and Karnaugh maps are used to simplify Boolean logic equations and various logic circuits. Decoders, multiplexers, latches, flip-flops, counters, and shift registers are all studied in detail. Laboratory experiments to reinforce lecture material are used throughout the course.

Lecture 02 hours. Laboratory 02 hours.

Prerequisite(s): EET-1110 DC Electric Circuits or concurrent enrollment.

EET-2111 Industrial Electronics I

03 Semester Credit

Construction, theory of operation, performance characteristics and application of DC motors, DC auxiliary devices, AC single phase transformers, AC three phase transformers, AC three phase motors. Specification and characteristics of power switching devices like triacs, Metal Oxide Semiconductor Field Effect Transistors (MOSFETs), Insulated Gate Bipolar Transistors (IGBTs), opto-isolators, switching power supplies and applicable safety standards.

Lecture 02 hours. Laboratory 02 hours.

Prerequisite(s): EET-1210 AC Electric Circuits, and MATH-1360 Technical Mathematics II, or MATH-1620 Calculus II.

EET-2120 Electronics I

03 Semester Credit

Introductory course to most common solid-state devices used in electronic circuits: diode, bipolar transistor, field effect transistor, and uni-junction transistor. Graphical and analytical DC and AC analysis of various electronic circuits used. Computer circuit analysis program Pspice used to predict DC voltages and currents and frequency response of different circuits. Laboratory experiments reinforce topics studies in lecture.

Lecture 02 hours. Laboratory 02 hours.

Prerequisite(s): EET-1210 AC Electric Circuits, or ATTC-1340 AC Circuits/Telephony MATH-1360 Technical Mathematics II, or MATH-1620 Calculus II, or concurrent enrollment.

EET-2150 Printed Circuit Layout

01 Semester Credit

Course uses contemporary program(s) to layout printed circuit board in single and multiple layers. Design rules, current return paths, crosstalk and other anomalous conditions are explored.

Lecture 00 hour. Laboratory 02 hours.

Prerequisite(s): EET-2120 Electronics I and EET-2140 Digital Circuits/Microprocessors II or departmental approval.

EET-2160 Surface Mount Soldering

01 Semester Credit

Surface mount soldering uses surface mount soldering equipment and techniques to facilitate design, construction and rework of circuit boards

Lecture 00 hour. Laboratory 02 hours.

Prerequisite(s): EET-2170 Signal Analysis, or departmental approval: prior work experience.

EET-2170 Signal Analysis

03 Semester Credit

Introduces bandwidth, frequency response, noise, modulation, spectrum analysis and distortion and how they apply to design, troubleshooting and circuit operation.

Lecture 02 hours. Laboratory 02 hours.

Prerequisite(s): EET-1210 AC Electric Circuits, and MIT-1100 Computer Applications and Programming, and EET-1140 Productivity Tools for Engineering.

Course Descriptions

EET-2290 Electrical Design Project

02 Semester Credit

Capstone course in Electrical-Electronic Engineering program. Designed to allow students opportunity to demonstrate and apply capabilities and skills acquired during their previous engineering technology course work. Students will choose an approved electronic project compatible with their interest and background. Project will include research, documentation, construction, and testing and conclude with a report and presentation of the results.

Lecture 01 hour. Laboratory 03 hours.

Prerequisite(s): EET-2140 Digital Circuits/Microprocessors II, and EET-2220 Electronics II or concurrent enrollment.

Deleted Courses

EET-2110 Industrial Electronics I (replaced by EET-2111)

EET-2250 Industrial Electronics II (no equivalent)

ELECTRONEURODIAGNOSTIC - END

END-2411 Neurophysiology of Electroencephalography/Sleep Disorders

03 Semester Credit

Analysis of the central and peripheral nervous systems, electrophysiology, and nerve conducting velocities in health and disease. Includes discussion of neurophysiology of sleep and the role of the autonomic nervous system. Emphasis on respiratory and cardiovascular effects, regulation of sleep, circadian rhythms and maturation of the sleep stages addressing neonates to adults.

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): BIO-2340 Anatomy and Physiology II, and END-1450 Intermediate Electroencephalography (EEG), or departmental approval.

Deleted Courses

END-2410 Neurophysiology of

Electroencephalography/Sleep Disorders (replaced by END-2411)

EMERGENCY MEDICAL TECHNOLOGY - EMT

EMT-1310 Cardiopulmonary Resuscitation

This course was approved to be cross-listed as HLTH-1310.

01 Semester Credit

Introduction to respiratory and circulatory emergencies in adults, children and infants. Instruction and treatment methods to meet American Heart Association or American Red Cross standards for CPR.

Lecture 01 hour. Laboratory 00 hours.

Prerequisite(s): None.

EMT-2330 Paramedic Theory I

06 Semester Credit

Principles and practices of emergency medical technician paramedics based on the Department of Transportation National Standard Paramedic Curriculum, current to at least 1999. Includes roles and responsibilities, Emergency Medical Services systems, well-being of the paramedic, therapeutic communications, medical/legal considerations, stress management and life span development.

Lecture 04 hours. Laboratory 04 hours.

Prerequisite(s): BIO-2330 Anatomy and Physiology I, and BIO-2340 Anatomy and Physiology II, and current Ohio Certified EMT-B, and departmental approval.

EMT-2340 Paramedic Theory II

06 Semester Credit

Principles and practices of emergency medical technician paramedics based on the Department of Transportation National Standard Paramedic Curriculum, current to at least 1999. Includes airway management, physical examination, trauma systems with mechanism of injury, hemorrhage and shock, trauma assessment and management related to: soft tissue, musculoskeletal, head, face, spinal, thoracic and abdominal injuries including burns.

Lecture 04 hours. Laboratory 03 hours.

Other Required Hours: Directed Practice: 112 hours per semester.

Prerequisite(s): EMT-2330 Paramedic Theory I, and current Ohio EMT-B certification and departmental approval.

EMT-2350 Paramedic Theory III

06 Semester Credit

Principles and practices of emergency medical technician paramedics based on the Department of Transportation National Standard Paramedic Curriculum, current to at least 1999. Includes anatomy and physiology of the pulmonary system, assessment and treatment of pulmonary emergencies, anatomy and physiology of cardiovascular system, assessment of cardiac and stroke patient, EKG interpretation, cardiac and stroke treatment modalities, cardiac treatment pharmacology, defibrillation, and advanced cardiac life support.

Lecture 04 hours. Laboratory 03 hours.

Other Required Hours: Directed Practice: 112 hours per semester.

Prerequisite(s): EMT-2340 Paramedic Theory II, and Ohio EMT-B certification, and departmental approval.

EMT-2360 Paramedic Theory IV

06 Semester Credit

Principles and practices of emergency medical technician paramedics based on the Department of Transportation National Standard Paramedic Curriculum, current to at least 1999. Includes management of endocrine, GI, renal/urological, toxicology, hematology, infectious, environmental and behavioral emergencies. Management of special needs patients, including geriatric, pediatric, and neonatal medical emergencies age groups. Detailed assessment and treatment of the OB/GYN patient and emergency field delivery procedures. Basic orientation in the study of ambulance operations, hazardous materials, rescue awareness and crime scene awareness.

Lecture 04 hours. Laboratory 03 hours.

Other Required Hours: Directed Practice: 112 hours per semester.

Prerequisite(s): EMT-2350 Paramedic Theory III, and current Ohio EMT-Basic certification, and departmental approval.

Deleted Courses (Replacements/Equivalencies)

EMT-2310 Paramedic Theory I (replaced by EMT-2330 and EMT-2340)

EMT-2320 Paramedic Theory II (replaced by EMT-2350 and EMT-2360)

ENGLISH - ENG

ENG-2730 Exploration of World Mythology

03 Semester Credit

Develops skills for the in-depth exploration of literature. Focuses on reading and interpreting myths from around the world and throughout history, practicing various analytical approaches essential to building interpretive arguments.

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): ENG-1020 College Composition II, or ENG-102H Honors Composition II, or departmental approval.

ENGLISH AS A SECOND LANGUAGE - ESL

ESL-1030 English as a Second Language: Basic Grammar for Communication

06 Semester Credit

English for non-native speakers. Understanding of basic grammatical forms and functions of American English and practice in producing them. Focus on form, meaning and use in oral communication.

Lecture 06 hour. Laboratory 00 hours.

Prerequisite(s): None.

ESL-1110 English as a Second Language: Grammar for Communication I

04 Semester Credit

English for non-native speakers. Understanding of basic grammar structures of American English and practice in producing them. Focus on form, meaning, and use in oral and written communication.

Lecture 03 hours. Laboratory 02 hours.

Prerequisite(s): ESL-1030 English as a Second Language: Basic Grammar for Communication, and ESL-1020 English as a Second Language: Basic Reading and Writing; or placement by ESL assessment exam.

ESL-1120 English as a Second Language: Reading and Writing I

05 Semester Credit

English for non-native speakers. Practice in reading high beginning texts. Practice in writing narratives and personal expression paragraphs using basic sentence patterns and correct spelling and punctuation.

Lecture 05 hours. Laboratory 00 hours.

Prerequisite(s): ESL-1030 English as a Second Language: Basic Grammar for Communication, and ESL-1020 English as a Second Language: Basic Reading and Writing; or Placement by ESL assessment exam; and ESL-1110 English as a Second Language: Grammar for Communication I, or concurrent enrollment.

ESL-1210 English as a Second Language: Grammar for Communication II

04 Semester Credit

English for non-native speakers. Understanding of intermediate grammar, structures of American English and practice in producing them. Focus on form, meaning, and use in oral and written communication.

Lecture 03 hours. Laboratory 02 hours.

Prerequisite(s): ESL-1110 English as a Second Language: Grammar for Communication I, and ESL-1120 English as a Second Language: Reading and Writing I, and ESL-1130 Speaking English as a Second Language I; or placement by ESL assessment exam.

ESL-1220 English as a Second Language: Reading and Writing II

05 Semester Credit

English for non-native speakers. Practice in reading intermediate texts. Practice in writing personal essays and responses to readings, using intermediate sentence patterns and correct spelling and punctuation.

Lecture 05 hours. Laboratory 00 hours.

Prerequisite(s): ESL-1130 Speaking English as a Second Language I, and ESL-1110 English as a Second Language: Grammar for Communication I, and ESL-1120 English as a Second Language: Reading and Writing I; or placement by ESL assessment exam; and ESL-1210 English as a Second Language: Grammar for Communication II, or concurrent enrollment.

Course Descriptions

ESL-1230 Speaking English as a Second Language II 03 Semester Credit

Intermediate communication for non-native speakers. Practice communicating by speaking and listening to American English. Develop competence and confidence in listening comprehension and conversational skills within supportive, structured and non-structured situations. Recognize and produce sounds, rhythm and intonation patterns at an intermediate level.

Lecture 02 hours. Laboratory 02 hours.

Prerequisite(s): ESL-1110 English as a Second Language: Grammar for Communication I, and ESL-1120 English as a Second Language: Reading and Writing I, and ESL-1130 Speaking English as a Second Language I; or placement by ESL assessment exam; and ESL-1210 English as a Second Language: Grammar for Communication II, or concurrent enrollment.

ESL-1310 English as a Second Language: Grammar for Communication III 04 Semester Credit

English for non-native speakers. Understanding of advanced grammar structures of American English and practice in producing them. Focus of form, meaning, and use in oral and written communication.

Lecture 03 hours. Laboratory 02 hours.

Prerequisite(s): ESL-1210 English as a Second Language: Grammar for Communication II, and ESL-1220 English as a Second Language: Reading and Writing II, and ESL-1230 Speaking English as a Second Language II; or placement by ESL assessment exam.

ESL-1320 English as a Second Language: Reading and Writing III 05 Semester Credit

English for non-native speakers. Practice in reading advanced texts and literary material. Practice in writing interpretive essays and personal responses to readings, using advanced sentence patterns and correct spelling and punctuation.

Lecture 05 hours. Laboratory 00 hours.

Prerequisite(s): Placement by ESL assessment exam; or ESL-1210 English as a Second Language: Grammar for Communication II, and ESL-1220 English as a Second Language: Reading and Writing II, and ESL-1230 Speaking English as a Second Language II; and ESL-1310 English as a Second Language: Grammar for Communication III, or concurrent enrollment.

ESL-1330 Speaking English as a Second Language III 03 Semester Credit

Advanced communication for non-native speakers. Practice communicating by listening to and speaking American English. Develop critical listening and speaking skills and strategies, and improve pronunciation for

academic, professional, and social settings.

Lecture 02 hours. Laboratory 02 hours.

Prerequisite(s): ESL-1210 English as a Second Language: Grammar for Communication II, and ESL-1220 English as a Second Language: Reading and Writing II, and ESL-1230 Speaking English as a Second Language II; or placement by ESL assessment exam; and ESL-1310 English as a Second Language: Grammar for Communication III or concurrent enrollment.

GENERAL STUDIES - GEN

GEN-1032 Information Literacy and Library Research 02 Semester Credit

Hands-on experience using the World Wide Web, print and electronic library resources to locate information for course related and personal needs. Emphasis is on the use of search strategies, information retrieval and management, and the application of critical thinking to library research.

Lecture 02 hours. Laboratory 00 hours.

Prerequisite(s): Eligibility for ENG-1010 College Composition I.

Deleted Course

GEN-1031 CyberResearch in the Library (replaced by GEN-1032)

HEALTH - HLTH

HLTH-1310 Cardiopulmonary Resuscitation

This is a new course approved to be cross-listed with EMT-1310.

01 Semester Credit

Introduction to respiratory and circulatory emergencies in adults, children and infants. Instruction and treatment methods to meet American Heart Association or American Red Cross standards for CPR.

Lecture 01 hour. Laboratory 00 hours.

Prerequisite(s): None.

INFORMATION TECHNOLOGY - IT

IT-2350 Advanced Database Systems

04 Semester Credit

Apply knowledge of relational algebra, data migration, data warehousing, data mining, distributed databases and security to design, develop and normalize an SQL database to 3rd normal form using appropriate diagrams and database objects. Retrieve, insert, update, delete, troubleshoot and report data from complex SQL databases.

Lecture 03 hours. Laboratory 02 hours.

Prerequisite(s): IT-2300 Database Use and Design, and MATH-1180 Intermediate Algebra for Technologies or MATH-1200 Intermediate Algebra; or departmental approval.

INTEGRATED SYSTEMS ENGINEERING TECHNOLOGY - ISET

ISET-1300 Mechanical/Electrical Print Reading 02 Semester Credit

Introduction to fundamental theory and application of blueprint reading skills. Included material will cover electrical, mechanical, structural drawings with symbols and wiring diagrams, Safety Codes, basic troubleshooting techniques. Extensive guided instruction and practice provided.

Lecture 01 hour. Laboratory 02 hours.

Prerequisite(s): None.

ISET-1310 Mechanical Power Transmission 02 Semester Credit

Introduction to basic concepts of industrial maintenance and installation of mechanical drive systems including bearing, shafts, gears, and couplings. With an emphasis on OSHA safety standards, installation, maintenance, troubleshooting, and lubrication of mechanical components.

Lecture 01 hour. Laboratory 02 hours.

Prerequisite(s): None.

ISET-1320 Fundamentals of Fluid Power 02 Semester Credit

Principles of power transmission are presented and contrasted with other means of transmission. Includes laws and principles of fluid power transmission, units of pressure and flow, plumbing materials and sizing, pressure losses through piping, and the uses of vacuum and vacuum applications. Extensive guided instruction and practice provided.

Lecture 01 hour. Laboratory 02 hours.

Prerequisite(s): ISET-1300 Mechanical/Electrical Print Reading.

ISET-1340 Industrial Piping and Tubing 02 Semester Credit

Concepts and principles specific to piping, pipefitting, and tubing techniques, materials, routing and layout including types of material, cutting, threading, measurements, fittings, bending and offsets. Extensive guided instruction and practice provided.

Lecture 01 hour. Laboratory 02 hours.

Prerequisite(s): ISET-1300 Mechanical/Electrical Print Reading.

ISET-1410 Applied Electricity I 03 Semester Credit

Fundamentals of electricity with emphasis on resistance, direct current voltage and current, electrical quantities and units of measurements. Ohm's Law, Kirchoff's voltage and current laws will also be covered.

Lecture 02 hours. Laboratory 02 hours.

Prerequisite(s): ISET-1300 Mechanical/Electrical Print Reading or concurrent enrollment; or departmental approval.

ISET-1420 Applied Electricity II 03 Semester Credit

Principles and applications of electricity with emphasis on alternating current, inductors, capacitors, and phase relationships. Electrical quantities and units of measurements, Ohm's Law, Kirchoff's voltage and current laws, single and three phase transformers will also be included. Extensive guided instruction and practice provided.

Lecture 02 hours. Laboratory 02 hours.

Prerequisite(s): ISET-1410 Applied Electricity I, or departmental approval. Highly recommend students complete MATH-1160 Technical Mathematics I prior to enrolling in this course.

ISET-1460 Fundamental Boiler Technology 03 Semester Credit

Concepts and fundamental skills associated with the operation and maintenance of steam boilers. Topics include an overview of steam boilers and boiler operation, basic boiler processes, boiler construction and material properties, boiler operating and maintenance procedures, combustion theory and fuels, efficiency, and codes and standards. Safety codes and procedures, preventive maintenance and basic troubleshooting techniques will also be covered. Extensive guided instruction and practice provided.

Lecture 02 hours. Laboratory 02 hours.

Prerequisite(s): None.

ISET-2200 Industrial Motor Controls 03 Semester Credit

Instruction in theory, application, and use of industrial type motors focusing on topics of safety, direct current (DC) motors, alternating current (AC) motors, single-phase motors, three-phase motors, motor trouble shooting methods, and motor starting. Extensive guided instruction and practice provided.

Lecture 02 hours. Laboratory 02 hours.

Prerequisite(s): ISET-1420 Applied Electricity II, or departmental approval.

ISET-2210 Commercial Wiring 03 Semester Credit

Principles of commercial electrical installations to prepare for work in the electrical field in a commercial, environmental setting. Based on the National Electric Code, study includes job specifications, sizing and selection of materials, and installation techniques. Extensive guided instruction and practice provided.

Lecture 02 hours. Laboratory 02 hours.

Prerequisite(s): ISET-2240 Applied National Electric Code or concurrent enrollment; or departmental approval.

ISET-2220 Fundamentals of Electronics and Instrumentation

03 Semester Credit

Concepts of electronics circuitry and instruments including purpose, function, and operation of diodes, transistors, SCR's, DIAC's, TRIAC's, FET's, and other solid state devices used in live dynamic electronic circuits. Extensive guided instruction and practice provided.

Lecture 02 hours. Laboratory 02 hours.

Prerequisite(s): ISET-1420 Applied Electricity II, and ISET-2200 Industrial Motor Controls; or departmental approval.

ISET-2240 Applied National Electric Code

03 Semester Credit

Introduction to the National Electric Code including industry safety hazards, standards, and precautions. Code book structure, terminology, and electrical installations will be presented. Extensive guided instruction and practice provided.

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): ISET-1420 Applied Electricity II.

ISET-2450 Heating Ventilation Air Conditioning/Refrigeration II

02 Semester Credit

Topics include refrigeration, heat transfer and thermodynamics HVAC/R. Course covers modern HVAC/R systems including their major components, controls, different duct work designs, combustion, and HVAC/R blueprint reading. Install heating and air conditioning, start up and troubleshoot equipment, live demonstrations on heating and air conditioning systems, and preparation for the HVAC test. Extensive guided instruction and practice provided.

Lecture 01 hour. Laboratory 02 hours.

Prerequisite(s): ISET-1450 Heating Ventilation Air Conditioning/Refrigeration I, or departmental approval.

ISET-2460 Applied Boiler Technology

02 Semester Credit

The focus of this course will be applications of steam and hot water boilers, water chillers, steam and hydronic heating and cooling systems. This course is the prerequisite for the State of Ohio Low Pressure Operators License Exam Preparatory. Extensive guided instruction and practice provided.

Lecture 01 hour. Laboratory 02 hours.

Prerequisite(s): ISET-1460 Fundamental Boiler Technology, or departmental approval.

ISET-2500 Programmable Logic Controllers Maintenance I

03 Semester Credit

Fundamental concepts of Programmable Logic Controllers (PLCs) Maintenance including applications of industrial type PLCs requiring motion control, automated manufacturing and the functions PLCs serve in that environment. Extensive guided instruction and practice provided.

Lecture 02 hours. Laboratory 02 hours.

Prerequisite(s): ISET-2200 Industrial Motor Controls, or departmental approval.

ISET-2510 Programmable Logic Controllers Maintenance II

02 Semester Credit

Programming and application of Programmable Logic Controllers (PLCs) including timers, counters, program control, data manipulation, and math instructions. Extensive guided instruction and practice provided.

Lecture 01 hour. Laboratory 02 hours.

Prerequisite(s): ISET-2500 Programmable Logic Controllers Maintenance I, or departmental approval.

ISET-2520 Programmable Logic Controllers Maintenance III

02 Semester Credit

Programming and application of programmable logic controllers (PLCs) including sequencers, shift registers, PLC installation, editing, troubleshooting, process control, data acquisition, and computer-controlled machines and processes. Extensive guided instruction and practice provided.

Lecture 01 hour. Laboratory 02 hours.

Prerequisite(s): ISET-2510 Programmable Logic Controllers Maintenance II or Concurrent Enrollment; or departmental approval.

ISET-2990 Reliability Centered Maintenance

03 Semester Credit

Advanced concepts and principles of troubleshooting, preventive and predictive maintenance, reliability centered maintenance (RCM), elements of root cause failure analysis (RCFA, and Total Productive Maintenance (TPM).

Extensive guided instruction and practice provided.

Lecture 02 hours. Laboratory 02 hours.

Prerequisite(s): ISET-2500 Programmable Logic Controllers Maintenance I, and ISET-2210 Commercial Wiring, and departmental approval.

JOURNALISM/MASS COMMUNICATIONS - JMC

JMC-2000 Media Writing

03 Semester Credit

Introduction to writing skills necessary for professional media such as news, print, broadcast, public relations and advertising. Emphasis also on the writing process, grammatical style sheets, audience concerns and an in-class, professional presentation of written materials.

Lecture 02 hours. Laboratory 02 hours.

Prerequisite(s): ENG-1020 College Composition II, or ENG-102H Honors College Composition II.

OPTICAL TECHNOLOGY - OPT

OPT-2500 Optical Business

02 Semester Credit

Apply knowledge of organizations, sales, inventory, hiring and supervision to write a business plan; interpret financial data; set sales goals; evaluate inventory control systems; use point of sale software; conduct and interview and respond to a subordinate.

Lecture 02 hours. Laboratory 00 hours.

Prerequisite(s): Department approval.

OPT-2790 Lens Surfacing

03 Semester Credit

Apply knowledge of anatomy of the eye, lens fabrication, theories of surfacing, lens substrates, lens design, finishing, surfacing equipment, laboratory standards, quality control, surfacing calculations to determine appropriate lens designs that will meet customer requirements.

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): BIO-1230 Anatomy and Physiology of the Eye or concurrent enrollment, and eligibility for MATH-1060 Survey of Mathematics, and OPT-1420 Mechanical Optics II; or departmental approval.

OPT-2980 Optical Practicum Seminar II

03 Semester Credit

Capstone Course in Optical Technology. Integrates advanced concepts and knowledge gained from field experience into total learning process. Focus on organization of health care delivery system. Use of more advanced skills and management techniques, payroll, hiring, termination skills, and labor relations. Discussions on current issues included.

Lecture 00 hour. Laboratory 00 hours.

Other Required Hours: Seminar: 3 hours per week.

Prerequisite(s): Concurrent enrollment in OPT-2870 Optical Practicum II.

PARALEGAL STUDIES - PL

PL-1300 Civil Procedure

03 Semester Credit

Examine Rules of Courts which govern civil lawsuits, with emphasis on Ohio Rules of Civil Procedure. Analyze and apply rules pertaining to commencement of action, service, motion practice and discovery issues. Students begin portfolio of legal documents developed throughout program of study. Survey alternatives to litigation such as arbitration, negotiation, and mediation.

Lecture 03 hours. Laboratory 00 hours.

Prerequisite(s): ENG-1010 College Composition I; and PL-1000 Introduction to Paralegal Profession or concurrent enrollment.

PL-1400 Basic Legal Research and Writing

03 Semester Credit

Introduction to skills essential to effective identification, analysis and research of legal issues. Students learn to formulate research plans that require efficient use of basic research tools to locate primary and secondary authority. Practice in accessing sources commonly used by state court system and drafting projects, such as in-house legal memorandum and opinion letter, consistent with professional standards of style and citation. Emphasis on validating research and quickly accessing statutory and case law.

Lecture 02 hours. Laboratory 03 hours.

Prerequisite(s): ENG-1010 College Composition I; and PL-1000 Introduction to Paralegal Profession or concurrent enrollment.

PL-2400 Computer Assisted Legal Research

03 Semester Credit

Explores differences between traditional and electronically-accessed legal research. Students examine theoretical and practical aspects of computer-assisted legal research (CALR), formulate research requests, and process, compile, and evaluate research using commercial data base, CD-ROM databases, and Internet. Students apply both Boolean and "Natural Language" search methods. Students locate and use "The Ohio Rules of Appellate Procedure" to prepare appellate brief using Ohio citation format.

Lecture 02 hours. Laboratory 03 hours.

Prerequisite(s): PL-1300 Civil Procedure, and PL-1400 Basic Legal Research and Writing.

PHYSICAL EDUCATION - PE

PE-1460 Pilates

01 Semester Credit

Emphasis on proper breathing, core strength, kinesthetic awareness, mind over muscle, strengthening of opposing muscle groups and disease prevention as it relates to stress.

Lecture 01 hour. Laboratory 00 hours.

Prerequisite(s): None.

PLANT SCIENCE AND LANDSCAPE TECHNOLOGY - PST

Pending OBOR Approval

The following new courses in Plant Science and Landscape Technology are projected to be available effective Fall 2007.

PST-1430 Design I - Landscape Design and Construction Graphics

03 Semester Credit

Foundation and preparatory course for graphic communication processes and methods used in landscape design and landscape construction. Production and applications of a variety of drawing types and the tools and techniques used to produce them. Types of drawings studied will include; plan, section, elevation, isometric, perspective and freehand sketching. Other graphic techniques studied will include color rendering and construction detailing.

Lecture 01 hour. Laboratory 04 hours.

Prerequisite(s): MATH-1160 Technical Mathematics I or concurrent enrollment.

PST-1440 Design II: Introduction to Landscape Design

03 Semester Credit

Foundation course for landscape design. Basic principles, elements and processes of design and their relationship to landscape design. Aesthetic, environmental and programmatic systems analysis and the development of basic site and landscape design projects. Preparation of various design drawing types and models provides exposure to design theories applicable to the use of landform, vegetation, water and structural landscape elements.

Lecture 01 hour. Laboratory 04 hours.

Prerequisite(s): PST-1430 Design I - Landscape Design and Construction Graphics.

PST-2430 Design III - Planting Design

03 Semester Credit

Emphasis on the design relationships of plants to their optimum and intended environments. Basic and advanced planting design principles and techniques that address the aesthetic, environmental and engineering uses of plant material. Preparation of various design project drawing types and a personal plant palette including woody and

herbaceous materials for more complex landscape design solutions.

Lecture 02 hours. Laboratory 03 hours.

Prerequisite(s): PST-1440 Design II: Introduction to Landscape Design.

PST-2440 Design IV - Advanced Landscape Design

03 Semester Credit

Capstone course for the landscape design/build curriculum. Synthesis of the proficiencies gained and demonstrated in prior courses. Design methodologies and solutions to complex design programs. The regulatory and technical requirements involved in complex design issues. Advanced methods of client interview, governmental codes and environmental regulations, budget development, presentation and sales of landscape projects.

Lecture 02 hours. Laboratory 03 hours.

*Prerequisite(s): PST-2200 Advanced Landscape Contracting
PST-2430 Design III - Planting Design.*

PRACTICAL NURSING - PNUR

PNUR-1310 Fundamentals of Nursing

04 Semester Credit

Introduction to fundamentals of nursing care with emphasis on basic daily needs of patient utilizing the nursing process. Nursing knowledge and skills necessary for safe and accurate delivery of nursing care stressed. Basic communication and mental health concepts within cultural context introduced.

Lecture 02 hours. Laboratory 06 hours.

Prerequisite(s): Departmental approval: admission to Practical Nursing Program; BIO-1100 Introduction to Biological Chemistry, or concurrent enrollment; ENG-1010 College Composition I, or concurrent enrollment; MATH-1141 Applied Algebra and Mathematical Reasoning, or concurrent enrollment.

PNUR-1320 Nursing Management of Adults I

04 Semester Credit

Use the nursing process and scientific principles in providing care for patients with various health problems, the body's response to illness and stress, and its adaptations. Identifies common nursing interventions to meet basic needs of the adult patient.

Lecture 02 hours. Laboratory 06 hours.

Prerequisite(s): Departmental Approval: admission to Practical Nursing Program, and PNUR-1310 Fundamentals of Nursing, or concurrent enrollment; and BIO-1100 Introduction to Biological Chemistry, or concurrent enrollment; and ENG-1010 College Composition I, or concurrent enrollment; and MATH-1141 Applied Algebra and Mathematical Reasoning, or concurrent enrollment.

PNUR-1330 Nursing Management of Adults II
08 Semester Credit

Focuses on care of adults with acute and recurring medical and surgical conditions. Students develop skills in problem-solving through use of the nursing process as applied to individual situations, with goal of providing safe, competent, and standard nursing interventions to individual adult patient.

Lecture 04 hours. Laboratory 12 hours.

Prerequisite(s): PNUR-1320 Nursing Management of Adults I; BIO-2330 Anatomy and Physiology I or concurrent enrollment; and PSY-1010 General Psychology or concurrent enrollment, and departmental approval: admission to Practical Nursing Program.

PNUR-1340 Nursing Care of Families
04 Semester Credit

Designed to present basic concepts relating to human reproduction and childbearing cycle. Emphasis on nursing responsibility in assessment of normal and abnormal occurrences. Childbearing experience, nursing skills, and measures related primarily to ill newborn, children and adolescents considered in relation to entire family. Emotional and physical aspects incorporated.

Lecture 02 hours. Laboratory 06 hours.

Prerequisite(s): Departmental approval: admission to Practical Nursing program.

VETERINARY TECHNOLOGY - VT

VT-2401 Veterinary Pathology I
02 Semester Credit

Veterinary hematology and chemistry laboratory procedures including complete blood counts and clinical chemistries performed commonly in veterinary practices.

Lecture 01 hour. Laboratory 03 hours.

Prerequisite(s): BIO-1420 Anatomy and Physiology of Domestic Animals II, and BIO-2500 Microbiology or concurrent enrollment.

VT-2411 Veterinary Pathology II
02 Semester Credit

Veterinary medical laboratory procedures performed commonly in veterinary practices including urinalysis, veterinary microbiologic techniques, vaginal cytology, ear cytology, cytology of tissues and fluids, bone marrow evaluation, serology, coagulation tests and necropsy.

Lecture 01 hour. Laboratory 03 hours.

Prerequisite(s): VT-2401 Veterinary Pathology I.

VISUAL COMMUNICATION AND DESIGN
- VC&D

VC&D-1300 Graphic Design Drawing
01 Semester Credit

Commercial drawing for advertising, graphic design and illustration. Graphic thinking, stylization, use of reference, and use of selected, purposeful and quality line. If degree requires laboratory, students should enroll in related laboratory course.

Lecture 01 hour. Laboratory 00 hours.

Prerequisite(s): VC&D-1100 Fundamentals of Design and Layout or concurrent enrollment; concurrent enrollment in VC&D-130L Graphic Design Drawing Studio may be required.

VC&D-1400 Imaging and Design
01 Semester Credit

Skills and techniques in creation and manipulation of images. Impact of design and use of visuals for advertising, publications and multimedia. If degree program requires laboratory, students should enroll in related laboratory course.

Lecture 01 hour. Laboratory 00 hours.

Prerequisite(s): VC&D-1100 Fundamentals of Design and Layout or concurrent enrollment; or IT-1010 Introduction to Microcomputer Applications (non-VC&D students) or concurrent enrollment; or departmental approval; concurrent enrollment in VC&D-140L Imaging and Design Studio may be required.

VISUAL COMMUNICATION AND DESIGN
(DIGITAL VIDEO AND DIGITAL
FILMMAKING) - VCDV

VCDV-1180 Introduction to Digital Video and Digital Filmmaking
03 Semester Credit

Provides a strong technical foundation for further study and practice in the art and technology of digital video and digital filmmaking. Analysis of existing films, trailers, music videos and other examples of visual storytelling in regards to how thematic devices (lighting, color, picture composition, sound, graphics, etc.) work to communicate the production's theme. Produce and maintain quality image and sound throughout production and post-production. Covers use of lighting, color choices, editing, music, sound and typography/graphics to effectively communicate a production's theme or support a narrative.

Lecture 02 hours. Laboratory 03 hours.

Prerequisite(s): VC&D-1010 Macintosh Basics or concurrent enrollment.

VCDV-2180 Digital Cinematography

03 Semester Credit

Focus on issues facing directors of photography working in digital video. Discussion of current options in acquisition format for digital film productions and the limitations vs. advantages of a variety of digital video cameras. Students gain hands-on experience in digital cinematography: learning to control a variety of lighting instruments to produce desired effects for digital video. Emphasis on the practical use of light, color, picture composition, and camera movement to communicate a mood or theme.

Lecture 02 hours. Laboratory 03 hours.

Prerequisite(s): VC&D-1010 Macintosh Basics.

VCDV-2280 Advanced Digital Video and Digital Filmmaking: Exploring Genre and Technique

03 Semester Credit

This intensive, intermediate-level course emphasizes style and technique for scripting, shooting and editing digital video productions and a variety of genres. Editing styles for music video (cutting to the beat), narrative (continuity editing), documentary footage, and experimental are examined in relation to film theory and visual design principles. Hands-on use of cameras, lighting, and sound design equipment for digital video in the context actual productions. Students utilize digital workstations and industry standard online editing applications. Students take a film through all stages of a production from pre-production planning to post production. Emphasis on collaboration.

Lecture 02 hours. Laboratory 03 hours.

Prerequisite(s): VCDV-1180 Introduction to Digital Video and Digital Filmmaking, and VCDV-2180 Digital Cinematography or departmental approval: previous coursework and/or experience.

VCDV-2380 Visual Effects Compositing for Digital Video

03 Semester Credit

Focus on planning, producing and editing visual effects (VFX) and special effects (SFX) for film and video. Students digitally combine multiple video and graphic sources to create convincing moving image composites. Emphasis on shot composition, matching lighting, camera angles and movement. Hands-on projects involve green screen filming, motion mattes, vector-based animation for mattes, titles and motion graphics, rotoscoping and digital painting.

Lecture 02 hours. Laboratory 03 hours.

Prerequisite(s): VCPH-1450 Digital Imaging I; or VC&D-1400 Imaging and Design, and VC&D-140L Imaging and Design Studio; and VCDV-1180 Introduction to Digital Video and Digital Filmmaking, and VCDV-2180 Digital Cinematography; or departmental approval: previous coursework and/or experience.

VCDV-2480 Motion Graphics for Digital Video

03 Semester Credit

Focus on combining visual elements from a variety of sources into a composite motion graphic. Projects include film titles, logo animation, broadcast graphics, and kinetic digital display. Emphasis on the interplay of typography, animated graphics, movie clips and sound. Exploration of the literal and stylistic communication of meaning through interaction of type and image.

Lecture 02 hours. Laboratory 03 hours.

Prerequisite(s): VCPH-1450 Digital Imaging I; or VC&D-1400 Imaging and Design, and VC&D-140L Imaging and Design Studio; and VCDV-1180 Introduction to Digital Video and Digital Filmmaking, and VC&D-1200 Typography and Layout; or departmental approval: previous coursework and/or experience.

VCDV-2580 Digital Versatile Disk (DVD) Authoring and Design

03 Semester Credit

Focus on planning, designing, and executing a digital versatile disk (DVD). Topics include theory of DVD interface, history of DVD technology, basic non-linear editing, basic audio editing, exporting Moving Picture Experts Group (MPEG2) video and audio streams, developing flowcharts and storyboards for DVD interface, and designing still and motion menus.

Lecture 02 hours. Laboratory 03 hours.

Prerequisite(s): VCPH-1450 Digital Imaging I; or VC&D-1400 Imaging and Design, and VC&D-140L Imaging and Design Studio; and VCDV-1180 Introduction to Digital Video and Digital Filmmaking; or department approval: previous coursework and/or experience.