COMMITTEE: University Curriculum Committee

MEETING DATE: April 11, 2013

PERSONS PRESIDING: Donna Kain

REGULAR MEMBERS IN ATTENDANCE: Reece Allen, Leigh Cellucci, Annette Greer, Donna Kain, and Mark Richardson

EX-OFFICIO MEMBERS IN ATTENDANCE: Linner Griffin, Jean-Luc Scemama, and Katherine Swank

EXCUSED: Karen Vail-Smith and Angela Whitehurst

ABSENT: Amy McMillan and Jennifer Warren

SUPPORT: Kimberly Nicholson

OTHERS IN ATTENDANCE: College of Technology and Computer Science: Bob Chin, Phil Lunsford and Leslie Pagliari

ACTIONS OF MEETING

Agenda Item: I. Call to Order

(1.) Minutes
   The 03-28-13 UCC minutes were distributed electronically and presented at the meeting.

   Discussion:

   N/A

   Action Taken:

   Dr. Swank moved the minutes be approved. Dr. Allen seconded. Motion passed.

(2.) Announcements

   Discussion:

   Dr. Griffin thanked the attendees of the Acalog catalog management system presentation for their participation. Dr. Kain noted that implementation of this system at ECU will change how proposers will create marked catalog copy, and Diane Coltraine is developing a training session/document to explain how this will occur. Acalog will be one of the topics of the fall curriculum development workshop, which UCC liaisons will be encouraged to attend.
Dr. Kain stated it would be beneficial to provide notice regarding anticipated marked catalog copy development changes for those faculty who will be preparing undergraduate curriculum packages for the fall.

**Action Taken:**

NA

**Agenda Item:** II. College of Technology and Computer Science, Department of Technology Systems

(1.) Prerequisite Revision of Existing Course(s): DESN 2034, 2035, 3032, 3033, 3038, 3039

**Discussion:**

Dr. Chin presented.

**Action Taken:**

Dr. Greer moved that the proposal be approved as presented. Dr. Richardson seconded. Motion passed.

(2.) Revision of Existing Degree(s): BS in Design

**Discussion:**

Dr. Chin presented.

**Action Taken:**

Dr. Greer moved that the proposal be approved as presented. Dr. Richardson seconded. Motion passed.

**Agenda Item:** III. College of Technology and Computer Science, Department of Technology Systems

(1.) Proposal of New Course(s): ICTN 4520, 4521

**Discussion:**

Dr. Lunsford presented.

ICTN 4520, 4521
Dr. Greer said that it must be noted that the faculty voted and approved this new course. Dr. Lunsford said that was the case; so, he will add that information to the proposal.

Dr. Allen asked the unit to complete item #12 on the proposal (CTE approval).

Dr. Griffin asked if the acronyms could be identified (e.g., RFID). Dr. Lunsford said that he would add this information.

**Action Taken:**

Dr. Greer moved that the proposal be accepted as amended. Dr. Richardson seconded. Motion passed.

(2.) Revision of Existing Course(s): ICTN 1500, 1501

**Discussion:**

Dr. Lunsford presented.

Dr. Greer said that it must be noted that the faculty voted and approved this new course. Dr. Lunsford said that was the case; so, he will add that information to the proposal.

Dr. Greer noted that the total credit hours should be completed (see #13 in proposal).

Dr. Allen asked about #19a in the proposal and requested that the year of publication be included for the textbook.

**Action Taken:**

Dr. Greer moved that the proposal be accepted as amended. Dr. Richardson seconded. Motion passed.

(3.) Prerequisite Revision of Existing Course(s): ICTN 2732; 3900, 3901; 4064

**Discussion:**

Dr. Lunsford presented.

**Action Taken:**

Dr. Greer moved that the proposal be accepted as presented. Dr. Richardson seconded. Motion passed.

(4.) Banking of Existing Course(s): ICTN 4010, 4011
Discussion:
Dr. Lunsford presented.

Action Taken:
Dr. Greer moved that the proposal be accepted as presented. Dr. Richardson seconded. Motion passed.

(5.) Deletion of Existing Banked Course(s): ICTN 3520

Discussion:
Dr. Lunsford presented.

Action Taken:
Dr. Greer moved that the proposal be accepted as presented. Dr. Richardson seconded. Motion passed.

(6.) Revision of Existing Degree(s): BS in Industrial Technology, BS in Information and Computer Technology

Discussion:
Dr. Lunsford presented.

Action Taken:
Dr. Greer moved that the proposal be accepted as presented. Dr. Richardson seconded. Motion passed.

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Agenda Item: IV. Thomas Harriot College of Arts and Sciences, Department of English

(1.) Removal of 5000-level Courses from Undergraduate Catalog Previously Deleted by the GCC: ENGL 5060, 5125, 5160, 5165, 5250, 5260, 5275, 5770

Discussion:
Dr. Kain presented.

Action Taken:
Dr. Allen moved that the proposal be accepted as presented. Dr. Scemama seconded. Motion passed.

Agenda Item: V. Old Business

1. Update regarding implementation plan for removing 5000-level courses that are no longer in the graduate catalog from the undergraduate catalog including notification of affected units.

Discussion:

Dr. Kain presented. She noted that the implementation plan will be addressed over the summer.

Action Taken:

NA

2. Update regarding implementation plan approved this year for requesting units to delete or bank courses that have not been taught in over ten years.

Discussion:

Dr. Kain presented. She noted that this plan will be addressed over the summer. Implementation will be modeled after the GCC’s process. Units will be contacted regarding keeping or deleting the courses identified as not being taught in 10 or more years.

Action Taken:

NA


Discussion:

Dr. Allen presented.

Dr. Kain recommended that for E1a, we could add examples of support. (For example, projections of student demand, certification or accreditation requirements).

Dr. Kain recommended that for E1g, we could add an example as well. (For example, could project enrollment.)
Dr. Kain recommended that we add to B about new minors be included in the development of a new degree proposals are submitted as part of the new degree program.

Dr. Kain recommended for F that the sentence be added that “Units develop and approve the plan. Then, the proposal goes through the curriculum approval process.”

Dr. Griffin asked if F applied to proposals that want to offer DE delivery to an existing minor. Committee concurred that it would not.

Dr. Kain recommended that a sentence be added to address existing minors. Since curriculum is not being changed, it need not come before UCC. Place this in “G.”

Dr. Griffin asked about the E.1. She recommended that that it Read “A memorandum of request” and add E2. A complete proposal, which contains the following….”

Action Taken:

Dr. Kain said that we will continue this at our next meeting.

Curricular Actions Reviewed at This Meeting:

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Banked Courses: 8
Deletion of Existing /Banked Courses: 32

NEXT MEETING: April 25, 2013 organizational meeting

ITEMS TO BE DISCUSSED:

See agenda.

Dr. Cellucci moved to adjourn at 3:25 pm. Motion passed. Meeting adjourned.

Respectfully Submitted by

Leigh W. Cellucci
Secretary of the UCC
Marked Catalog Copy:

Agenda Item II

College of Technology and Computer Science

Department of Technology Systems

http://www.ecu.edu/cs-acad/ugcat/TechSystems.cfm

BS in Design

Robert A. Chin, Coordinator, 207 Science and Technology Building

The design program is accredited by the Association of Technology, Management, and Applied Engineering. Minimum degree requirement is **126 s.h.** credit as follows:

1. Foundations curriculum requirements (For information about courses that carry foundations curriculum credit see [Liberal Arts Foundations Curriculum](http://www.ecu.edu/cs-acad/ugcat/TechSystems.cfm)) including those listed below - **42 s.h.**

   All concentrations:
   - COMM 2410. Public Speaking (3) (F,S,SS) (FC:FA) or COMM 2420. Business and Professional Communication (3) (F,S,SS) (FC:FA)
   - ECON 2113. Principles of Microeconomics (3) (F,S,SS) (FC:SO)
   - MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math section of the SAT/ACT)
   - PHIL 2274. Business Ethics (3) (WI*) (F,S,SS) (FC:HU) or PHIL 2275. Professional Ethics (3) (WI*) (F,S,SS) (FC:HU)
   - PHYS 1250. General Physics (3) (F,S,SS) (FC:SC) (P PHYS 1250)
   - PHYS 1261. General Physics Laboratory (1) (F,S,SS) (FC:SC) (C PHYS 1260 or 2260)
   - PSYC 1000. Introductory Psychology (3) (F,S,SS) (FC:SO) (P: PSYC 1000 or 1060)
   - Architectural Technology:
     - GEOL 1700. Environmental Geology (4) (F,S) (FC:SC)
   - Mechanical Technology:
     - PHYS 1260. General Physics (3) (F,S,SS) (FC:SC) (P PHYS 1250)
     - PHYS 1261. General Physics Laboratory (1) (F,S,SS) (FC:SC) (C PHYS 1260 or 2260)

2. Core – **53-56** s.h.

   - DESN 2034, 2035. Engineering Graphics I (3,0) (F,S) (P/C: ITEC 2000 or MIS 2223)
   - DESN 2036, 2037. Computer-Aided Design and Drafting (3,0) (F,S) (P: DESN 2034)
DESN 3032, 3033. Engineering Graphics II (3,0) (S) (P: DESN 2036; ITEC 2080; PHYS 1250; P/C: ITEC 2090; or program coordinator approval)

DESN 4030, 4031. Descriptive Geometry (3,0) (S) (P: DESN 3032; MATH 1074)

FINA 2244. Legal Environment of Business (3) (F,S,SS)

IENG 2020, 2021. Materials and Processes Technology (3,0) (WI*) (F,S) (P/C: ITEC 2000 or MIS 2223)

IENG 3600. Statics and Strength of Materials (3) (S) (P: IENG 2020, MATH 1074)

ITEC 2000. Industrial Technology Applications of Computer Systems (3) (F,S) or MIS 2223 Introduction to Computers (3) (F,S,SS)

ITEC 2054, 2055. Electricity/Electronics Fundamentals (3,0) (F,S) (P/C: MATH 1074 or 1083 or 1085)

ITEC 2080, 2081. Thermal and Fluid Systems (3,0) (F,S) (P: IENG 2020)

ITEC 2090, 2091. Electromechanical Systems (3,0) (F,S) (P: ITEC 2054)

ITEC 3200. Introduction to Statistical Process Control (3) (F,S) (P: MATH 1065 or 1066; IENG 2020 or 3000 or MIS 2223) or MATH 2283. Statistics for Business (3) (F,S,SS) (FC:MA)

ITEC 3290. Technical Writing (3) (WI) (F,S,SS) (P: ENGL 1200)

ITEC 3292. Industrial Safety (3) (F,S) (P: Junior standing)

ITEC 3300. Technology Project Management (3) (F,S) (WI) (P: ENGL 1200; ITEC 2000 or MIS 2223)

ITEC 3800. Cost and Capital Project Analysis (3) (F,S) (P: MATH 1065; ITEC 2000 or 3000 or MIS 2223) or FINA 3004. Survey of Financial Management (3) (F,S)

ITEC 4293. Industrial Supervision (3) (WI) (F,S) (P: Senior standing or consent of instructor) or MGMT 3202. Fundamentals of Management (3) (F,S,SS)

ITEC 4300. Quality Assurance Concepts (3) (F,S) (P: ITEC 3200 or MATH 2283)

MATH 1074. Applied Trigonometry (2) (F,S,SS) (P: MATH 1065)

3. Concentration area (Choose one) - 23 s.h.

Architectural Technology:

BIOL 1060. Environmental Biology (4) (F,S,SS) (FC:SC)

BIOL 1061. Environmental Biology Laboratory (1) (F,S) (FC:SC)

DESN 3030, 3031. Architectural Drafting (3,0) (F) (P: DESN 2036 or IDSN 2281; ITEC 2080; or program coordinator approval)

DESN 3036, 3037. Architectural Design and Drafting (3,0) (F) (P: DESN 3030, 3032; or program coordinator approval)

DESN 3038, 3039. Sustainable Design (3,0) (S) (P: BIOL 1060, 1061; DESN 3030; GEOL 1700; ITEC 2090, 3300; PSYC 3241; or program coordinator approval)

PLAN 3021. Introduction to Planning Techniques (3) (F)

PLAN 3051. Introduction to GIS in Planning (3) (F)

PLAN 4003. Urban Form and Design (3) (S)

Mechanical Technology:

CHEM 1020. General Descriptive Chemistry (4) (S) (FC:SC)

CHEM 1021. General Descriptive Chemistry Laboratory (1) (S) (FC:SC)

DESN 3230, 3231. Rapid Prototyping (3,0) (S) (P: DESN 3032; IENG 2076)
DESN 3234, 3235. Jig and Fixture Design (3,0) (F) (P: DESN 3032; ITEC 2090; IENG 2076)
DESN 3236, 3237. Geometric Dimensioning and Tolerancing (3,0) (F) (P: DESN 3032; MATH 1074; ITEC 3200 or MATH 2283)
IENG 2076, 2077. Introduction to Computer Numerical Control (CNC) (3,0) (F,S) (P: DESN 2034)
IENG 3020, 3021. Robotics in Computer Integrated Manufacturing (3,0) (S) (P: IENG 2076, ITEC 2090)
IENG 3300. Plant Layout and Materials Handling (3) (F) (P/C: ITEC 3290; P: IENG 2020)

4. **Approved Free** electives to complete requirements for graduation. –5 8 s.h.

http://www.ecu.edu/cs-acad/ugcat/TechSystems.cfm

**BS in Industrial Engineering Technology**

*Merwan B. Mehta, Coordinator, 244 Slay Hall*

Minimum degree requirement is **126 s.h.** of credit as follows:

1. Foundations curriculum requirements (For information about courses that carry foundations curriculum credit see [Liberal Arts Foundations Curriculum](http://www.ecu.edu/cs-acad/ugcat/TechSystems.cfm) including those listed below) 42 s.h.

   COMM 2410. Public Speaking (3) (F,S,SS) (FC:FA) or COMM 2420. Business and Professional Communication (3) (F,S,SS) (FC:FA)
   ECON 2113. Principles of Microeconomics (3) (F,S,SS) (FC:SO)
   MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math sections of the SAT/ACT) or MATH 1066. Applied Mathematics for Decision Making (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or approval of dept chair)
   PHYS 1250, 1260. General Physics (3,3) (F,S,SS) (FC:SC) (P for 1250: MATH 1065 or 1066; P for 1260: PHYS 1250)
   PHYS 1251, 1261. General Physics Laboratory (1,1) (F,S,SS) (FC:SC) (C for 1251: PHYS 1250 or 2350; C for 1261: PHYS 1260 or 2260)
   PSYC 1000. Introductory Psychology (3) (F,S,SS) (FC:SO)
   PSYC 3241. Personnel and Industrial Psychology (3) (F,S,SS) (FC:SO) (P: PSYC 1000 or 1060)

2. Core - 69 s.h.

   DESN 2034, 2035. Engineering Graphics I (3,0) (F,S) (P/C: ITEC 2000 or MIS 2223)
   DESN 2036, 2037. Computer-Aided Design and Drafting (3,0) (F,S) (P: DESN 2034)
IENG 2020, 2021. Materials and Processes Technology (3,0) (WI*) (F,S) (P/C: ITEC 2000 or MIS 2223)
IENG 2076, 2077. Introduction to Computer Numerical Control (CNC) (3,0) (F,S) (P: DESN 2034)
IENG 3020, 3021. Robotics in Computer Integrated Manufacturing (3,0) (S) (P: IENG 2076; ITEC 2090)
IENG 3300. Plant Layout and Materials Handling (3) (F) (P/C ITEC 3290; P: IENG 2020)
IENG 3600. Statics and Strength of Materials (3) (S) (P: IENG 2020, MATH 1074)
IENG 4020. Manufacturing System Planning (3) (F) (P: ITEC 3200, MATH 2119)
IENG 4023. Advanced Manufacturing Systems (3) (S) (P: IENG 3300)
IENG 4024, 4025. Electromechanical Systems Integration (3,0) (F) (P: DESN 2036; IENG 3020)
IENG 4200. Work Methods and Ergonomic Analysis (3) (S) (P: ITEC 3200 or MATH 2283)
IENG 4900. Capstone (3) (S) (P: Senior Standing)
ITEC 2000. Industrial Technology Applications of Computer Systems (3) (F,S)
ITEC 2054, 2055. Electricity/Electronics Fundamentals (3,0) (F,S) (P/C: MATH 1074 or 1083 or 1085)
ITEC 2080, 2081. Thermal and Fluid Systems (3,0) (F,S) (P: IENG 2020)
ITEC 2090, 2091. Electromechanical Systems (3,0) (F,S) (P: ITEC 2054)
ITEC 3200. Introduction to Statistical Process Control (3) (F,S) (P: MATH 1065 or 1066; ITEC 2000 or 3000 or MIS 2223)
ITEC 3290. Technical Writing (3) (WI) (F,S,SS) (P: ENGL 1200)
ITEC 3292. Industrial Safety (3) (F,S) (P: Junior standing)
ITEC 3300. Technology Project Management (3) (F,S) (WI) (P: ENGL 1200; ITEC 2000 or MIS 2223)
ITEC 3800. Cost and Capital Project Analysis (3) (F,S) (P: MATH 1065; ITEC 2000 or 3000 or MIS 2223)
ITEC 4293. Industrial Supervision (3) (WI) (F,S) (P: Senior standing or approval of instructor)
ITEC 4300. Quality Assurance Concepts (3) (F,S) (P: ITEC 3200 or MATH 2283)

3. Cognates - 6 s.h.

CHEM 1020 General Descriptive Chemistry (4) (F,S)
MATH 1074. Applied Trigonometry (2) (F,S,SS) (P: MATH 1065)

4. Electives to complete requirements for graduation. - 9 s.h.

**BS in Industrial Technology**

*David L. Batts, Coordinator, 230 Slay Building*

The industrial technology program is accredited by the Association of Technology, Management, and Applied Engineering.
Student must have an associate of applied science degree from an approved technical program. Minimum degree requirement is **126 s.h.** of credit as follows. Students must complete at ECU a minimum of 42 s.h. credit of upper division core and concentration courses. Industrial technology courses completed at ECU and transfer courses must total at least 66 s.h. All students pursuing a bachelor of science in industrial technology through distance education (online) are required to complete ITEC 3000 in their initial semester of enrollment at East Carolina University. For distance education (online) students only, ITEC 3000 will fulfill 3 s.h. of the required 27 s.h. in their chosen concentration area. ITEC 3100, 4100 or any course that does not meet as a class may not be used as upper division core or concentration courses.

1. Foundations curriculum requirements (For information about courses that carry foundations curriculum credit see *Liberal Arts Foundations Curriculum*) including those listed below. 42 s.h.

   COMM 2410. Public Speaking (3) (F,S,SS) (FC:FA) or COMM 2420. Business and Professional Communication (3) (F,S,SS) (FC:FA)
   ECON 2113. Principles of Microeconomics (3) (F,S,SS) (FC:SO)
   MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math sections of the SAT/ACT) or MATH 1066. Applied Mathematics for Decision Making (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or approval of dept chair)
   PSYC 1000. Introductory Psychology (3) (F,S,SS) (FC:SO)
   PSYC 3241. Personnel and Industrial Psychology (3) (F,S,SS) (FC:SO) (P: PSYC 1000 or 1060)

2. Lower Division Core - 24 s.h.

   Transfer technical courses up to 24 s.h. or approved technical courses.

3. Upper Division Core - 15 s.h.

   ITEC 3200. Introduction to Statistical Process Control (3) (F,S) (P: MATH 1065 or 1066; ITEC 2000 or 3000 or MIS 2223)
   ITEC 3290. Technical Writing (3) (WI) (F,S,SS) (P: ENGL 1200)
   ITEC 3300. Technology Project Management (3) (WI) (F,S) (P: ENGL 1200; ITEC 2000 or MIS 2223)
   ITEC 3800. Cost and Capital Project Analysis (3) (F,S) (P: MATH 1065; ITEC 2000 or 3000 or MIS 2223)
   ITEC 4293. Industrial Supervision (3) (WI) (F,S) (P: Senior standing or approval of instructor)

4. Concentrations (choose one) - 27 s.h.

   Architectural Technology
DESN 3030, 3031. Architectural Drafting (3,0) (F) (P: DESN 2036 or IDSN 2281; ITEC 2080; or program coordinator approval)
DESN 3032, 3033. Engineering Graphics II (3,0) (S) (P: DESN 2036; ITEC 2080; PHYS 1250; P/C: ITEC 2090; or program coordinator approval)
DESN 3036, 3037. Architectural Design and Drafting (3,0) (F) (P: DESN 3030, 3032; or program coordinator approval)
DESN 3038, 3039. Sustainable Design (3,0) (S) (P: BIOL 1060, 1061; DESN 3030; GEOL 1700; ITEC 2090, 3300; PSYC 3241; or program coordinator approval)
PLAN 3021. Introduction to Planning Techniques (3) (F)
PLAN 3051. Introduction to GIS in Planning (3) (F)
PLAN 4003. Urban Form and Design (3) (S)
Approved technical electives (6 s.h.)

Bioprocess Manufacturing
ITEC 3292. Industrial Safety (3) (F,S) (P: Junior standing)
ITEC 4150. Microbiology for Industrial Processing (3) (S EY) (P: Admitted to bioprocess manufacturing concentration within BS industrial technology degree)
ITEC 4250. Engineering for Food Safety and Sanitation (3) (F OY) (P: Admitted to bioprocess manufacturing concentration within BS industrial technology degree)
ITEC 4300. Quality Assurance Concepts (3) (F,S) (P: ITEC 3200 or MATH 2283)
ITEC 4350. Separation Techniques for Industrial Processing (3) (S OY) (P: Admitted to bioprocess manufacturing concentration within BS industrial technology degree)
ITEC 4450. Waste Treatment Techniques for Industrial Processing (3) (S OY) (P: Admitted to bioprocess manufacturing concentration within BS industrial technology degree)
ITEC 4550. Quality in Regulatory Environments (3) (F, EY) (P: Admitted to bioprocess manufacturing concentration within BS industrial technology degree)
Approved technical electives (6 s.h.)

Distribution and Logistics
IDIS 2771. Introduction to Distribution and Logistics (3)
IDIS 2830. ERP Systems for Distributors (3) (Formerly IDIS 3830)
IDIS 3700. Transportation Logistics (3) (Formerly IDIS 3800) (P: IDIS 2771)
IDIS 3815. Supply Chain Logistics (3) (P: IDIS 2771, 2830)
IDIS 3820. Purchasing Logistics (3) (Formerly IDIS 3805) (P: IDIS 2830, 3815)
IDIS 3835. Security and Risk Analysis for Distributors (3) (P: IDIS 3700)
IDIS 4785. Strategic Pricing for Distributors (3) (Formerly IDIS 3825) (P: IDIS 3820)
IDIS 4790. Global Logistics (3) (Formerly IDIS 3785) (P: IDIS 3700, 3815)
Approved technical electives (3 s.h.)

Health Information Technologies
HIMA 3000. Medical Terminology for Health Professionals (3) (F, S, SS)
HIMA 3120. Health Care Delivery Systems (3) (F) (P: HSMA 2000; P/C: HSMA 3030 or consent of instructor)
HIMA 4030. Quality Management in Health Care (3) (S) (P: HIMA 3113, 3120; or consent of instructor)
HSMA 2000. Professional Roles and Environments in Health Care (3) (SL*) (F,S,SS)
HSMA 3020. Health Care Payment Systems (3) (P: HSMA 2000; P/C: HIMA 3120; HSMA 3035; HSMA 3030 or consent of instructor)
HSMA 3025. Professional Ethical Codes and Law in Health Care (3) (F) (P: HSMA 2000; P/C: HSMA 3030 or consent of instructor)
HSMA 3035. Interpersonal Team Skills for Health Care Supervisors and Practitioners (3) (S) (P: HSMA 2000; P/C: HSMA 3030 or consent of instructor)
HSMA 4010. Health Information Management (3) (F) (P: HIMA 3120; HSMA 3035)
Approved technical electives (3 s.h.)

Industrial Supervision
IDIS 2771. Introduction to Distribution and Logistics (3) (F,S)
IDIS 3790. Technical Presentations for Industry (3) (F,S) (P: ITEC 2000 or MIS 2223)
IDIS 3815. Supply Chain Logistics (3) (F,S) (P: IDIS 2771)
IENG 3300. Plant Layout and Materials Handling (3) (F) (P/C ITEC 3290; P: IENG 2020)
IENG 4023. Advanced Manufacturing Systems (3) (S) (P: IENG 3300)
ITEC 3292. Industrial Safety (3) (S) (P: Junior standing)
ITEC 4300. Quality Assurance Concepts (3) (F,S) (P: ITEC 3200 or MATH 2283)
Approved technical electives (6 s.h.)

Information and Computer Technology
Choose 27 hours from below:
ICTN 2530, 2531. Network Environment II (3,0) (F,S) (P: ICTN 1500)
ICTN 2900, 2901. Fundamental Network Security (3,0) (F) (P: ICTN 2150)
ICTN 3250, 3251. Internetwork Routing Technology (3,0) (F) (P: Current CCNA certification)
ICTN 3540, 3541. Network Environment III (3,0) (F) (P: ICTN 2510, 2530)
ICTN 3900, 3901. Web Services Management (3,0) (F) (P: ICTN 2530)
ICTN 4010, 4011. User Application Management and Emerging Technologies (3,0) (F) (P: ICTN 2510, 2530)
ICTN 4040. Enterprise Information Security (3) (S) (P: ICTN 2530, 2900)
ICTN 4064. Regulations and Policies (3) (S) (P: ICTN 2150; P/C; FINA 2244)
ICTN 4150, 4151. Switching Network Technology (3,0) (F) (P: Current CCNA certification)
ICTN 4200, 4201. Intrusion Detection Technologies (3,0) (F) (P: ICTN 2530, 2900)
ICTN 4250, 4251. Enterprise Network Security Technology (3,0) (S) (P: Current CCNA certification)
ICTN 4310. Digital Forensics (3) (P: ICTN 2530, 2900)
ICTN 4402, 4404, 4406, 4408. Special Topics (1,2,3,4) (P: Consent of instructor)
ICTN 4590, 4591. Network Maintenance and Troubleshooting (3,0) (S) (P: Current CCNA certification; ICTN 3250, 4150)
ICTN 4600, 4601. Enterprise Information Technology Management (3,0) (S) (P: ICTN 2154, 2530)
ICTN 4700, 4701. Virtualization Technologies (3,0) (P: ICTN 2530)
ICTN 4750. Enterprise Data Storage Technologies (3) (P: ICTN 2530)
ICTN 4800, 4801. Information Assurance Technologies (3,0) (F) (P: ICTN 2530, 2900)

Manufacturing Systems
IENG 3300. Plant Layout and Materials Handling (3) (F) (P/C: ITEC 3290, P: IENG 2020)
IENG 4020. Manufacturing System Planning (3) (F) (P: ITEC 3200)
IENG 4023. Advanced Manufacturing Systems (3) (S) (P: IENG 3300)
IENG 4200. Work Methods and Ergonomic Analysis (3) (S) (P: ITEC 3200 or MATH 2283)
ITEC 3292. Industrial Safety (3) (F,S) (P: Junior standing)
ITEC 4300. Quality Assurance Concepts (3) (F,S) (P: ITEC 3200 or MATH 2283)
Approved technical electives (9 s.h.)

Mechanical Technology
DESN 3032, 3033. Engineering Graphics II (3,0) (S) (P: DESN 2036; ITEC 2080; PHYS 1250; P/C: ITEC 2090; or program coordinator approval)
DESN 3230, 3231. Rapid Prototyping (3,0) (S) (P: DESN 3032; IENG 2076)
DESN 3234, 3235. Jig and Fixture Design (3,0) (F) (P: DESN 3032; ITEC 2090; IENG 2076)
DESN 3236, 3237. Geometric Dimensioning and Tolerancing (3,0) (F) (P: DESN 3032; MATH 1074; ITEC 3200 or MATH 2283)
IENG 2076, 2077. Introduction to Computer Numerical Control (CNC) (3,0) (F) (P: DESN 2034)
IENG 3020, 3021. Robotics in Computer Integrated Manufacturing (3,0) (S) (P: IENG 2076; ITEC 2090)
IENG 3300. Plant Layout and Materials Handling (3) (F) (P/C: ITEC 3290; P: IENG 2020)
Approved technical electives (6 s.h.)

5. Cognates - 5 s.h.

FINA 2244. Legal Environment of Business (3) (F,S,SS)
MATH 1074. Applied Trigonometry (2) (F,S,SS) (P: MATH 1065)

6. Approved electives to complete requirements for graduation.
Architectural Design Technology Minor

The architectural design technology design minor requires a minimum of 30 s.h. of credit:
DESN 2034, 2035. Engineering Graphics I (3,0) (F,S) (P/C: ITEC 2000 or MIS 2223)
DESN 2036, 2037. Computer-Aided Design and Drafting (3,0) (F,S) (P: DESN 2034)
DESN 3030, 3031. Architectural Drafting (3,0) (F) (P: DESN 2036 or IDSN 2281; ITEC 2080; or program coordinator approval)
DESN 3032, 3033. Engineering Graphics II (3,0) (F,S) (P: DESN 2036; ITEC 2080; PHYS 1250; P/C: ITEC 2090; or program coordinator approval)
DESN 3036, 3037. Architectural Design and Drafting (3,0) (F) (P: DESN 3030, 3032; or program coordinator approval)
DESN 3038, 3039. Sustainable Design (3,0) (S) (P: BIOL 1060, 1061; DESN 3030; GEOL 1700; ITEC 2090, 3300; PSYC 3241; or program coordinator approval)
ITEC 2000. Industrial Technology Applications of Computer Systems (3) (F,S) or MIS 2223. Introduction to Computers (3) (F,S,SS)
And 9 s.h. from the following:
PLAN 1900. Planning for the Human Environment (3) (F,S,SS)
PLAN 3021. Introduction to Planning Techniques (3) (F)
PLAN 3051. Introduction to GIS in Planning (3) (F) (P: PLAN 3410 or consent of instructor)
PLAN 4003. Urban Form and Design (3) (S)
PLAN 4021. Advanced GIS Applications in Planning (3) (S) (P: PLAN 3051 or GEOG 2410 or consent of instructor)
PLAN 4046. Planning and Design Studio (3) (F,S)
PLAN 5985. Historic Preservation Planning (3)

Mechanical Design Technology Minor

The mechanical design technology minor requires 30 s.h. of credit:
DESN 2034, 2035. Engineering Graphics I (3,0) (F,S) (P/C: ITEC 2000 or MIS 2223)
DESN 2036, 2037. Computer-Aided Design and Drafting (3,0) (F,S) (P: DESN 2034)
DESN 3032, 3033. Engineering Graphics II (3,0) (F,S) (P: DESN 2036; ITEC 2080; PHYS 1250; P/C: ITEC 2090; or program coordinator approval)
DESN 3230, 3231. Rapid Prototyping (3,0) (S) (P: DESN 3032; IENG 2076)
DESN 3234, 3235. Jig and Fixture Design (3,0) (F) (P: DESN 3032; ITEC 2090; IENG 2076)
IENG 2076, 2077. Introduction to Computer Numerical Control (CNC) (3,0) (F) (P: DESN 2034)
ITEC 2000. Industrial Technology Applications of Computer Systems (3) (F,S) or MIS 2223. Introduction to Computers (3) (F,S,SS)
ITEC 2054, 2055. Electricity/Electronics Fundamentals (3,0) (F,S) (P/C: MATH 1074 or 1083 or 1085)
ITEC 2090, 2091. Electromechanical Systems (3,0) (F,S) (P: ITEC 2054)
MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math sections of the SAT/ACT

http://www.ecu.edu/cs-acad/ugcat/CoursesD.cfm#DESN

DESN: Design

2034, 2035. Engineering Graphics I (3,0) (F,S)
2 lecture and 2 lab hours per week. P/C: ITEC 2000 or MIS 2223. Basic skills and theory of graphics. Applies graphics in manufacturing, construction, and related fields.

2036, 2037. Computer-Aided Design and Drafting (3,0) (F,S)
2 lecture and 2 lab hours per week. P: DESN 2034. Applies computer-aided design and drafting (CADD) as related to design process and development of engineering drawings and other documents. Use of CADD in various design disciplines, including architectural, electrical, mechanical, and civil.

3030, 3031. Architectural Drafting (3,0) (F)
2 lecture and 2 lab hours per week. P: DESN 2036 or IDSN 2281; ITEC 2080; or program coordinator approval. Fundamental areas of residential working drawings.

3032, 3033. Engineering Graphics II (3,0) (S)
2 lecture and 2 lab hours per week. P: DESN 2036; ITEC 2080; PHYS 1250; P/C: ITEC 2090; or program coordinator approval. Continuation of DESN 2036, 2037 with greater depth in application of graphics in manufacturing construction and related fields.

3036, 3037. Architectural Design and Drafting (3,0) (F)
2 lecture and 2 lab hours per week. P: DESN 3030, 3032; or program coordinator approval. Practical experience in design of commercial structures from graphics perspective. Develop and interpret working drawings.

3038, 3039. Sustainable Design (3,0) (S)
2 lecture and 2 lab hours per week. P: BIOL 1060, 1061; DESN 2036, 3030; GEOL 1700; ITEC 2090, 3300; PSYC 3241; or program coordinator approval. Introduces sustainability issues related to building technology and pursuit of design solutions.

3230, 3231. Rapid Prototyping (3,0) (S)
2 lecture and 2 lab hours per week. P: DESN 3032; IENG 2076. Develops holistic view and initial competencies in engineering design by conceiving, designing, manufacturing, and testing system components.
College of Technology and Computer Science

Department of Technology Systems

http://www.ecu.edu/cs-acad/ugcat/TechSystems.cfm

BS in Industrial Technology
David L. Batts, Coordinator, 230 Slay Building

The industrial technology program is accredited by the Association of Technology, Management, and Applied Engineering.

Student must have an associate of applied science degree from an approved technical program. Minimum degree requirement is 126 s.h. of credit as follows. Students must complete at ECU a minimum of 42 s.h. credit of upper division core and concentration courses. Industrial technology courses completed at ECU and transfer courses must total at least 66 s.h. All students pursuing a bachelor of science in industrial technology through distance education (online) are required to complete ITEC 3000 in their initial semester of enrollment at East Carolina University. For distance education (online) students only, ITEC 3000 will fulfill 3 s.h. of the required 27 s.h. in their chosen concentration area. ITEC 3100, 4100 or any course that does not meet as a class may not be used as upper division core or concentration courses.

1. Foundations curriculum requirements (For information about courses that carry foundations curriculum credit see Liberal Arts Foundations Curriculum) including those listed below. 42 s.h.
   - COMM 2410. Public Speaking (3) (F,S,SS) (FC:FA) or COMM 2420. Business and Professional Communication (3) (F,S,SS) (FC:FA)
   - ECON 2113. Principles of Microeconomics (3) (F,S,SS) (FC:SO)
   - MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on mathematics placement test) or MATH 1066. Applied Mathematics for Decision Making (3) (F,S,SS) (FC:MA) (P: Appropriate score on mathematics placement test or approval of dept chair)
   - PSYC 1000. Introductory Psychology (3) (F,S,SS) (FC:SO)
   - PSYC 3241. Personnel and Industrial Psychology (3) (F,S,SS) (FC:SO) (P: PSYC 1000 or 1060)

2. Lower Division Core - 24 s.h.
   Transfer technical courses up to 24 s.h. or approved technical courses.

3. Upper Division Core - 15 s.h.
   - ITEC 3200. Introduction to Statistical Process Control (3) (F,S) (P: MATH 1065 or 1066; ITEC 2000 or 3000 or MIS 2223)
   - ITEC 3290. Technical Writing (3) (WI) (F,S,SS) (P: ENGL 1200)
   - ITEC 3300. Technology Project Management (3) (WI) (F,S) (P: ENGL 1200; ITEC 2000 or MIS 2223)
ITEC 3800. Cost and Capital Project Analysis (3) (F,S) (P: MATH 1065; ITEC 2000 or 3000 or MIS 2223)
ITEC 4293. Industrial Supervision (3) (WI) (F,S) (P: Senior standing or approval of instructor)

4. Concentrations (choose one) - 27 s.h.

Architectural Technology
DESN 3030, 3031. Architectural Drafting (3,0) (F) (P: DESN 2036 or IDSN 2281; ITEC 2080; or program coordinator approval)
DESN 3032, 3033. Engineering Graphics II (3,0) (F,S) (P: DESN 2036: ITEC 2080; PHYS 1250; C: ITEC 2090; or program coordinator approval)
DESN 3036, 3037. Architectural Design and Drafting (3,0) (F) (P: DESN 3030, 3032; or program coordinator approval)
DESN 3038, 3039. Sustainable Design (3,0) (S) (P: BIOL 1060, 1061; DESN 3030; GEOL 1700; ITEC 2090, 3300; PSYC 3241; or program coordinator approval)
PLAN 3021. Introduction to Planning Techniques (3) (F)
PLAN 3051. Introduction to GIS in Planning (3) (F)
PLAN 4003. Urban Form and Design (3) (S)

Approved technical electives (6 s.h.)

Bioprocess Manufacturing
ITEC 3292. Industrial Safety (3) (F,S) (P: Junior standing)
ITEC 4150. Microbiology for Industrial Processing (3) (S EY) (P: Admitted to bioprocess manufacturing concentration within BS industrial technology degree)
ITEC 4250. Engineering for Food Safety and Sanitation (3) (F OY) (P: Admitted to bioprocess manufacturing concentration within BS industrial technology degree)
ITEC 4300. Quality Assurance Concepts (3) (F,S) (P: ITEC 3200 or MATH 2283)
ITEC 4350. Separation Techniques for Industrial Processing (3) (S OY) (P: Admitted to bioprocess manufacturing concentration within BS industrial technology degree)
ITEC 4450. Waste Treatment Techniques for Industrial Processing (3) (S OY) (P: Admitted to bioprocess manufacturing concentration within BS industrial technology degree)
ITEC 4550. Quality in Regulatory Environments (3) (F, EY) (P: Admitted to bioprocess manufacturing concentration within BS industrial technology degree)

Approved technical electives (6 s.h.)

Distribution and Logistics
IDIS 2771. Introduction to Distribution and Logistics (3)
IDIS 2830. ERP Systems for Distributors (3) (Formerly IDIS 3830)
IDIS 3700. Transportation Logistics (3) (Formerly IDIS 3800) (P: IDIS 2771)
IDIS 3815. Supply Chain Logistic4020 s (3) (P: IDIS 2771, 2830)
IDIS 3820. Purchasing Logistics (3) (Formerly IDIS 3805) (P: IDIS 2830, 3815)
IDIS 3835. Security and Risk Analysis for Distributors (3) (P: IDIS 3700)
IDIS 4785. Strategic Pricing for Distributors (3) (Formerly IDIS 3825) (P: IDIS 3820)
IDIS 4790. Global Logistics (3) (Formerly IDIS 3785) (P: IDIS 3700, 3815)

Approved technical electives (3 s.h.)

Health Information Technologies
HIMA 3000. Medical Terminology for Health Professionals (3) (F, S, SS)
HIMA 3120. Health Care Delivery Systems (3) (F) (P: HSMA 2000; P/C: HSMA 3030 or consent of instructor)

HIMA 4030. Quality Management in Health Care (3) (S) (P: HIMA 3113, 3120; or consent of instructor)

HSMA 2000. Professional Roles and Environments in Health Care (3) (SL*) (F,S,SS)

HSMA 3020. Health Care Payment Systems (3) (S) (P: HSMA 2000; P/C: HIMA 3120; HSMA 3035; HSMA 3030 or consent of instructor)

HSMA 3025. Professional Ethical Codes and Law in Health Care (3) (F) (P: HSMA 2000; P/C: HSMA 3030; or consent of instructor)

HSMA 3035. Interpersonal Team Skills for Health Care Supervisors and Practitioners (3) (S) (P: HSMA 2000; P/C: HSMA 3030 or consent of instructor)

HSMA 4010. Health Information Management (3) (F) (P: HIMA 3120; HSMA 3035)

Approved technical electives (3 s.h.)

Industial Supervision

IDIS 2771. Introduction to Distribution and Logistics (3) (F,S)

IDIS 3790. Technical Presentations for Industry (3) (F,S) (P: ITEC 2000 or MIS 2223)

IDIS 3815. Supply Chain Logistics (3) (F,S) (P: IDIS 2771)

IENG 3300. Plant Layout and Materials Handling (3) (F) (P: IENG 2020)

IENG 4023. Advanced Manufacturing Systems (3) (S) (P: IENG 3300)

ITEC 3292. Industrial Safety (3) (S) (P: Junior standing)

ITEC 4300. Quality Assurance Concepts (3) (F,S) (P: ITEC 3200 or MATH 2283)

Approved technical electives (6 s.h.)

Information and Computer Technology

Choose 27 hours from below:

ICTN 2530, 2531. Network Environment II (3,0) (F,S) (P: ICTN 1500)

ICTN 2900, 2901. Fundamental Network Security (3,0) (F) (P: ICTN 2150)

ICTN 3250, 3251. Internetwork Routing Technology (3,0) (F) (P: Current CCNA certification)

ICTN 3540, 3541. Network Environment III (3,0) (F) (P: ICTN 2510, 2530)

ICTN 3900, 3901. Web Services Management (3,0) (F) (P: ICTN 2510, 2530)

ICTN 4010, 4011. User Application Management and Emerging Technologies (3,0) (F)

(P: ICTN 2510, 2530)

ICTN 4040. Enterprise Information Security (3) (S) (P: ICTN 2530, 2900)

ICTN 4064. Regulations and Policies (3) (S) (P: FINA 2244; ICTN 2150, 2530; P/C: FINA 2244)

ICTN 4150, 4151. Switching Network Technology (3,0) (F) (P: Current CCNA certification)

ICTN 4200, 4201. Intrusion Detection Technologies (3,0) (F) (P: ICTN 2530, 2900)

ICTN 4250, 4251. Enterprise Network Security Technology (3,0) (S) (P: Current CCNA certification)

ICTN 4310. Digital Forensics (3) (P: ICTN 2530, 2900)

ICTN 4402, 4404, 4406, 4408. Special Topics (1,2,3,4) (P: Consent of instructor)

ICTN 4520, 4521. Wireless Communication (3.0) (F) (P: ICTN 2150, 2530)

ICTN 4590, 4591. Network Maintenance and Troubleshooting (3,0) (S) (P: Current CCNA certification; ICTN 3250, 4150)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Type</th>
<th>Prerequisites</th>
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<tr>
<td>ICTN 4600, ICTN 4601</td>
<td>Enterprise Information Technology Management (3,0) (S) (P: ICTN 2154, 2530)</td>
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<td>ICTN 4700, ICTN 4701</td>
<td>Virtualization Technologies (3,0) (P: ICTN 2530)</td>
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<td>ICTN 4750</td>
<td>Enterprise Data Storage Technologies (3) (P: ICTN 2530)</td>
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<td>ICTN 4800, ICTN 4801</td>
<td>Information Assurance Technologies (3,0) (F) (P: ICTN 2530, 2900)</td>
<td>3,0</td>
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<tr>
<td><strong>Manufacturing Systems</strong></td>
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<tr>
<td>IENG 3300</td>
<td>Plant Layout and Materials Handling (3) (F) (P/C: ITEC 3290, P: IENG 2020)</td>
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<td>IENG 4023</td>
<td>Advanced Manufacturing Systems (3) (S) (P: IENG 3300)</td>
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<td>IENG 4200</td>
<td>Work Methods and Ergonomic Analysis (3) (S) (P: ITEC 3200 or MATH 2283)</td>
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<td>(S)</td>
<td>(P: ITEC 3200 or MATH 2283)</td>
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<td>ITEC 3292</td>
<td>Industrial Safety (3) (F,S) (P: Junior standing)</td>
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<td>(P: Junior standing)</td>
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<td>ITEC 4300</td>
<td>Quality Assurance Concepts (3) (F,S) (P: ITEC 3200 or MATH 2283)</td>
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<td>(P: ITEC 3200 or MATH 2283)</td>
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<td>Approved technical electives (9 s.h.)</td>
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<td><strong>Mechanical Technology</strong></td>
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<td>DESN 3032, DESN 3033</td>
<td>Engineering Graphics II (3,0) (F,S) (P: DESN 2036; ITEC 2080; PHYS 1250; C: ITEC 2090; or program coordinator approval)</td>
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<td>(F,S)</td>
<td>(P: DESN 2036; ITEC 2080; PHYS 1250; C: ITEC 2090; or program coordinator approval)</td>
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<td>DESN 3230, DESN 3231</td>
<td>Rapid Prototyping (3,0) (S) (P: DESN 3032; IENG 2076)</td>
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<td>(P: DESN 3032; IENG 2076)</td>
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<td>DESN 3234, DESN 3235</td>
<td>Jig and Fixture Design (3,0) (F) (P: DESN 3032; ITEC 2090; IENG 2076)</td>
<td>3,0</td>
<td>(F)</td>
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<td>DESN 3236, DESN 3237</td>
<td>Geometric Dimensioning and Tolerancing (3,0) (F) (P: DESN 3032; MATH 1074; ITEC 3200 or MATH 2283)</td>
<td>3,0</td>
<td>(F)</td>
<td>(P: DESN 3032; MATH 1074; ITEC 3200 or MATH 2283)</td>
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<td>IENG 2076, IENG 2077</td>
<td>Introduction to Computer Numerical Control (CNC) (3,0) (F) (P: DESN 3032; MATH 1074; ITEC 3200 or MATH 2283)</td>
<td>3,0</td>
<td>(F,S)</td>
<td>(P: DESN 3032; MATH 1074; ITEC 3200 or MATH 2283)</td>
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<td>IENG 3020, IENG 3021</td>
<td>Robotics in Computer Integrated Manufacturing (3,0) (S) (P: IENG 2076; ITEC 2090)</td>
<td>3,0</td>
<td>(S)</td>
<td>(P: IENG 2076; ITEC 2090)</td>
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<tr>
<td>IENG 3300</td>
<td>Plant Layout and Materials Handling (3) (F) (P/C: ITEC 3290; P: IENG 2020)</td>
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<td>Approved technical electives (6 s.h.)</td>
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5. **Cognates** - 5 s.h.
   - FINA 2244. Legal Environment of Business (3) (F,S,SS)
   - MATH 1074. Applied Trigonometry (2) (F,S,SS) (P: MATH 1065)

6. **Approved electives to complete requirements for graduation.**

**BS in Information and Computer Technology**

*Philip J. Lunsford, Coordinator, C123 Science and Technology Building*

The information and computer technology program is accredited by the Association of Technology, Management, and Applied Engineering. Credit toward an information and computer technology major will not be given for any ICTN course with a grade less than C. Minimum degree requirement is **126 s.h.** credit as follows:

1. **Foundations curriculum requirements** (For information about courses that carry foundations curriculum credit see [Liberal Arts Foundations Curriculum](#)) including those listed below. **42 s.h.**

COMM 2410. Public Speaking (3) (F,S,SS) (FC:FA) or COMM 2420. Business and Professional Communication (3) (F,S,SS) (FC:FA)
ECON 2113. Principles of Microeconomics (3) (F,S,SS) (FC:SO)
MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on mathematics placement test) or MATH 1066. Applied Mathematics for Decision Making (3) (F,S,SS) (FC:MA) (P: Appropriate score on mathematics placement test or approval of dept chair)
PHYS 1250, 1260. General Physics (3,3) (F,SC) (FC:SC) (P for 1250: MATH 1065 or 1066; P for 1260: PHYS 1250)
PHYS 1251, 1261. General Physics Laboratory (1,1) (F,SS) (FC:SC) (C for 1251: PHYS 1250 or 2350; C for 1261: PHYS 1260 or 2260)
PSYC 1000. Introductory Psychology (3) (F,S,SS) (FC:SO)
PSYC 3241. Personnel and Industrial Psychology (3) (F,S,SS) (FC:SO) (P: PSYC 1000 or 1060)

2. Lower Division Core - 24 s.h.
ICTN 1500, 1501. PC Hardware and Computer Technology Fundamentals (3,0) (F,S)
ICTN 2150, 2151. Network Fundamentals (3,0) (F,S)
ICTN 2154, 2155. Digital Communication Systems (3,0) (F,S) (P: ICTN 2150)
ICTN 2158, 2159. Computer Network Technology (3,0) (F,S) (P: ICTN 2154)
ICTN 2510, 2511. Network Environment I (3,0) (F) (P: ICTN 1500)
ICTN 2530, 2531. Network Environment II (3,0) (S) (P: ICTN 1500)
ICTN 2732. Scripting for Information Technology (3) (S) (P: ITEC 2000 or MIS 2223; P/C: ICTN 2530)
ITEC 2000. Industrial Technology Applications of Computer Systems (3) (F,S) or ITEC 3000. Internet Tools Technology (3) (F,S) (P: MIS 2223 or ITEC 2000 or equivalent experience) or equivalent.

3. Upper Division Core - 24 s.h.
ICTN 2900, 2901. Fundamental Network Security (3,0) (F) (P: ICTN 2150)
ICTN 3540, 3541. Network Environment III (3,0) (F) (P: ICTN 2530)
ICTN 4000. Network Internship (3) (F,S,SS) (P: Junior standing and ICTN major)
ICTN 4020. Senior Information and Computer Technology Capstone Design Project I (1) (WI) (F) (P: Senior standing, IDIS 3790, ITEC 3290, 3300; ICTN major)
ICTN 4022. Senior Information and Computer Technology Capstone Design Project II (2) (WI) (S) (P: ICTN 4020)
ICTN 4040. Enterprise Information Security (3) (S) (P: ICTN 2530, 2900)
IDIS 3790. Technical Presentations (3) (P: ITEC 2000 or MIS 2223)
ITEC 3290. Technical Writing (3) (WI) (F,S,SS) (P: ENGL 1200)
ITEC 3300. Technology Project Management (3) (WI) (F,S) (P: ENGL 1200; ITEC 2000 or MIS 2223)

4. Concentration area (Choose one.).12 s.h.
Computer Networking:
ICTN 3250, 3251. Internetwork Routing Technology (3,0) (F) (P: Current CCNA certification)
ICTN 4150, 4151. Switching Network Technology (3,0) (F) (P: Current CCNA certification)
ICTN 4250, 4251. Enterprise Network Security Technology (3,0) (S) (P: Current CCNA certification)
ICTN 4590, 4591. Network Maintenance and Troubleshooting (3,0) (WI) (S) (P: Current CCNA certification, ICTN 3250, 4150)

Information Security:
ICTN 4064. Regulations and Policies (3) (S) (P: FINA 2244; ICTN 2150, 2530; P/C: FINA 2244)
ICTN 4200, 4201. Intrusion Detection Technologies (3,0) (F) (P: ICTN 2530, 2900)
ICTN 4600, 4601. Enterprise Information Technology Management (3,0) (S) (P: ICTN 2154, 2530)
ICTN 4800, 4801. Information Assurance Technologies (3,0) (F) (P: ICTN 2530, 2900)

Information Technology:
ICTN 3900, 3901. Web Services Management (3,0) (F) (P: ICTN 2510, 2530)
ICTN 4010, 4011. User Application Management and Emerging Technologies (3,0) (F) (P: ICTN 2510, 2530)
ICTN 4064. Regulations and Policies (3) (S) (P: FINA 2244; ICTN 2150, 2530; P/C: FINA 2244)
ICTN 4520, 4521. Wireless Communication (3,0) (F) (P: ICTN 2150, 2530)
ICTN 4600, 4601. Enterprise Information Technology Management (3,0) (S) (P: ICTN 2154, 2530)

5. Cognates - 12 s.h.
   FINA 2244. Legal Environment of Business (3) (F,S,SS)
   ITEC 3200. Introduction to Statistical Process Control (3) (F,S) (P: MATH 1065 or 1066; ITEC 2000 or 3000 or MIS 2223) or MATH 2283. Statistics for Business (3) (F,S,SS) (P: MATH 1065 or 1066 or equivalent)
   ITEC 3800. Cost and Capital Project Analysis (3) (F,S) (P: MATH 1065; ITEC 2000 or 3000 or MIS 2223) or ACCT 2101 Survey of Financial and Managerial Accounting (3) (F,S) (P: MATH 1065 or 1066) or ACCT 2401. Financial Accounting (3) (F,S,SS) (P: MATH 1065 or 1066 or 2119 or 2121 or 2171)
   ITEC 4293. Industrial Supervision (3) (WI) (F,S) (P: Senior standing or approval of instructor) or MGMT 3202. Fundamentals of Management (3) (F,S,SS) (P: ECON 1000 or 2113)

6. Approved electives to complete requirements for graduation.

Information and Computer Technology Minor
The information and computer technology minor requires 24 s.h. of credit.
ICTN 1500, 1501. PC Hardware Information and Computer Technology Fundamentals (3,0) (F,S)
ICTN 2150, 2151. Network Fundamentals (3,0) (F,S)
ICTN 2154, 2155. Digital Communication Systems (3,0) (F,S) (P: ICTN 2150)
ICTN 2158, 2159. Computer Networking Technology (3,0) (F,S) (P: ICTN 2154)
ICTN 2510, 2511. Network Environment I (3,0) (F) (P: ICTN 1500)
ICTN 2530, 2531. Network Environment II (3,0) (S) (P: ICTN 1500)
ICTN 2900, 2901. Fundamental Network Security (3,0) (F) (P: ICTN 2150)
ICTN 4040. Enterprise Information Security (3) (S) (P: ICTN 2530, 2900)

http://www.ecu.edu/cs-acad/ugcat/Courses1.cfm

ICTN: Information and Computer Technology

1500, 1501. PC Hardware Information and Computer Technology Fundamentals (3,0) (F,S)
   Must be taken concurrently. 2 lecture and 2 lab hours per week. Hardware components of PCs and BIOS and operating system options needed to support those components. Topics include interface standards, component configuration, and troubleshooting. Computing system hardware and architecture, networking hardware and architecture, emerging technologies.

2150, 2151. Network Fundamentals (3,0) (F,S)
   Must be taken concurrently. 2 lecture and 2 lab hours per week. Introduction to the architecture, structure, functions, components, and models of the Internet and other data networks.

2154, 2155. Digital Communication Systems (3,0) (F,S)
   Must be taken concurrently. 2 lecture and 2 lab hours per week. P: ICTN 2150. Introduces local-area and wide-area networks. Provides basic understanding of network concepts and router programming.

2158, 2159. Computer Networking Technology (3,0) (F,S)
   Must be taken concurrently. 2 lecture and 2 lab hours per week. P: ICTN 2154. Advanced study of local-area and wide-area networks. Develops competence in designing and implementing enterprise-wide campus network using routers and switches.

2510, 2511. Network Environment I (3,0) (F)
   Must be taken concurrently. 2 lecture and 2 lab hours per week. P: ICTN 1500. Network management using various NOS products. Topics include NOS setup, network resource management, user and group management, and security model.

2530, 2531. Network Environment II (3,0) (F,S) Formerly ICTN 3530, 3501
   Must be taken concurrently. 2 lecture and 2 lab hours per week. P: ICTN 1500. Network management using various products such as Linux and Solaris, including NOS setup, network resource management, user and group management, and security model.

2732. Scripting for Information Technology (3) (S)
   P: ITEC 2000 or MIS 2223; P/C: ICTN 2530. Introduction of scripting for information technology applications.

2900, 2901. Fundamental Network Security (3,0) (F)
   Must be taken concurrently. 2 lecture and 2 lab hours per week. P: ICTN 2150. Computer network and information security principles, devices, and applications.

3250, 3251. Internetwork Routing Technology (3,0) (F)
   Must be taken concurrently. 2 lecture and 2 lab hours per week. P: Current CCNA certification. Advanced network routing technology in industry. Topics include routing protocols and technology, network performance consideration, and traffic control over LAN and WAN.
3540, 3541. Network Environment III (3,0) (F)
   Must be taken concurrently. 2 lecture and 2 lab hours per week. P: ICTN 2530. Enterprise
   system administration using mixed vendor network operating systems, such as Linux and
   Microsoft. Topics include integrating networking services such as network file systems,
   enterprise printing administration, remote administration, and host and network security
   issues.

3900, 3901. Web Services Management (3,0) (F)
   Must be taken concurrently. 2 lecture and 2 lab hours per week. P: ICTN2510, 2530.
   Current technologies that provide web services and management for organizations. Topics
   include web content development, web server installation and configuration, database
   integration, and security issues.

4000. Network Internship (3) (F,S,SS)
   Minimum of 120 contact hours at internship site. P: Junior standing; ICTN major.
   Educational collaboration between business and industry and ECU, linking theoretical and
   lab practice with real-world applications. Proposal, fully describing planned activities,
   developed around student’s educational goals and objectives.

4010, 4011. User Application Management and Emerging Technologies (3,0) (F)
   2 lecture and 2 lab hours per week. P: 2530. Emerging technologies that provide flexible
   and secure access to enterprise information resources. Topics include wireless and WLAN
   technology, broadband Internet connection, storage area networks, data
   warehousing/mining, application support for enterprise network.

4020. Senior Information and Computer Technology Capstone Design Project I (1) (WI) (F)
   1 lecture hour per week. P: Senior standing, IDIS 3790, ITEC 3290, 3300; ICTN major.
   Open-ended design project, exposing students to practice of information and computer
   technology. Development of proposal for ICTN 4022 project.

4022. Senior Information and Computer Technology Capstone Design Project II (2) (WI) (S)
   2 lecture hours per week. P: ICTN 4020. Open-ended design project, exposing students to
   practice of information and computer technology. Completion of project proposed in ICTN
   4020.

4040. Enterprise Information Security (3) (S)
   P: ICTN 2530, 2900. Planning, implementing, and maintain an information security
   program in an enterprise.

4064. Regulations and Policies (3) (S)
   P: FINA 2244; ICTN 2150, 2530; P/C: FINA 2244. Government and industry regulations
   and policies applied to information technology industry. Broad view of impact and
   effectiveness of regulations and policies.

4150, 4151. Switching Network Technology (3,0) (F)
   Must be taken concurrently. 2 lecture and 2 lab hours per week. P: Current CCNA
   certification. Concepts and technology used to interconnect multiple LANs. Covers
   advanced switching technology and applications.

4200, 4201. Intrusion Detection Technologies (3,0) (F)
   Must be taken concurrently. 2 lecture and 2 lab hours per week. P: ICTN 2530, 2900.
   Computer network intrusion detection principles, devices, and applications.

4250, 4251. Enterprise Network Security Technology (3,0) (S)
   Must be taken concurrently. 2 lecture and 2 lab hours per week. P: Current CCNA
   certification. Enterprise network security threats, vulnerabilities, and mitigation techniques.
The installation, troubleshooting, and monitoring of network devices to maintain integrity, confidentiality, and availability of data and devices.

4310. Digital Forensics (3)
   P: ICTN 2530, 2900. Techniques and tools of computer forensics evidence collection, analysis and presentation.

4402, 4404, 4406, 4408. Special Topics (1,2,3,4)
   May be repeated with consent of chair. P: Consent of instructor. Emphasis on an emerging technology or development in the field.

4501, 4503, 4505. Laboratory Problems (1,2,3)
   2 lab hours per week for 4501; 4 lab hours per week for 4503, 6 lab hours per week for 4505. May be repeated for credit with consent of dept chair. P: Consent of instructor. Independent study of concepts, processes, tools, and/or materials in the field of Information and Computer Technology.

4520, 4521. Wireless Communication (3,0) (F)
   Must be taken concurrently. 2 lecture and 2 lab hours per week. P: ICTN 2150, 2530. Study of characteristics, technology, and standards.

4590, 4591. Network Maintenance and Troubleshooting (3,0) (S)
   Must be taken concurrently. 2 lecture and 2 lab hours per week. P: Current CCNA certification; ICTN 3250, 4150. Large enterprise computer network system maintenance, support, troubleshooting, and improvement.

4600, 4601. Enterprise Information Technology Management (3,0) (S)
   Must be taken concurrently. 2 lecture and 2 lab hours per week. P: ICTN 2154, 2530. Case studies on various issues about enterprise IT management.

4700, 4701. Virtualization Technologies (3,0)
   Must be taken concurrently. 2 lecture and 2 lab hours per week. P: ICTN 2530. Examination of current virtualization technologies and infrastructure management techniques.

4750. Enterprise Data Storage Technologies (3)
   P: ICTN 2530. Examination of current intelligent storage technologies and data management, and business continuity and disaster recovery techniques.

4800, 4801. Information Assurance Technologies (3,0) (F)
   Must be taken concurrently. 2 lecture and 2 lab hours per week. P: ICTN 2530, 2900. Information assurance principles, devices, and applications. Emphasis on problems relating to systems of varied operations system technologies and computer networking technologies.

ICTN Banked Courses
   3520. Wireless Communications (4)
   4010, 4011. User Application Management and Emerging Technologies (3,0)
   4592, 4593. Optimizing Converged Networks (3,0)
Agenda Item IV

Thomas Harriot College of Arts and Sciences

Department of English

http://www.ecu.edu/cs-acad/ugcat/CoursesE.cfm#engl

ENGL: English

4999. English Professional Seminar (1)
   P: English major. Examines topics related to preparation for graduate school and/or professional life. Design and completion of senior portfolio.

5060. History of Literary Criticism (3)
   Major texts of literary criticism from Plato through Pater.

5125. The English Novel Through Hardy (3)
   Development of English novel: Defoe, Richardson, Fielding, Austen, the Brontes, Dickens, Thackeray, Eliot, Hardy, and others.

5150. The Twentieth-Century British and American Novel (3)
   Representative British and American novelists of twentieth century. Joyce, Woolf, Lawrence, Hemingway, Faulkner, and recent writers.

5160. English Drama to 1642 (3)
   Types and developments of English drama from beginnings in Middle Ages until 1642.

5165. English Drama: Dryden to Sheridan (3)
   Types and developments of English drama from Restoration to Romantic period.

5170. Modern Drama (3)
   Drama from Ibsen to present. Focus on British and American playwrights.

5230. Southern Regional Literature (3)
   Southern writing representing attitudes of region. Confined to literary genres.

5250. The American Novel, 1800 to 1920 (3)
   Development of American novel. Emphasis on Brown, Cooper, Hawthorne, Melville, Twain, Howells, James, Crane, Dreiser, and Cather.

5260. The Novel Since 1945 (3)
   Contemporary novel in English. Emphasis on American and British works.

5275. Nineteenth-Century Poetry (3)
   Major British and American poets.

5280. Twentieth-Century Poetry (3)
   Variety of voices that comprise poetry written in English.

5330. Studies in Women’s Literature (3)
   May be repeated for credit by graduate students. Writings of women within context of feminist scholarship and criticism. Focus on genre within literary period or specific national/international context.

5350. Special Studies in Film (3)
   May be repeated for credit by graduate students. Aspects of world film literature. Topics to be announced by instructor.
5360. Studies in African-American Literature (3)
   May be repeated for credit by graduate students. Critical methodologies relating to
development of African-American literature. Focus on genre or historical context.

5770. Advanced Editing (3)
   P: ENGL 3870 or consent of instructor. Advanced study of and practice in various
   editorial functions as applied to non-fiction books, periodicals, and corporate documents.

5780. Advanced Writing for Business and Industry (3)
   P: ENGL 3880 or consent of instructor. Advanced composition with extensive writing
   practice.

5840. Advanced Poetry Writing (3)
   Graduate students may repeat for a maximum of 9 s.h. P: ENGL 3840 or consent of
   instructor. Advanced poetry-writing practice.

5850. Advanced Fiction Writing (3)
   Graduate students may repeat for a maximum of 9 s.h. P: ENGL 3850 or consent of
   instructor. Practice in prose fiction writing. Emphasis on publication.

5860. Advanced Nonfiction Writing (3)
   Graduate students may repeat for a maximum of 9 s.h. P: ENGL 3860 or consent of
   instructor. Practice in non-fiction prose writing. Emphasis on publication.

5890. Advanced Script Writing (3)
   P: ENGL 3830; consent of instructor. Completion of one-act play or major portion of
   full-length play or screenplay.

ENGL Banked Courses
2750. Grammar and Linguistics for Elementary Education (3)
2800. Critical Reading (3)
3620. Oriental Literature (3)
3800. Computing for the Humanities (3)
5120. English Drama (3)
5130. The English Novel through Jane Austen (3)
5140. The English Novel from Scott through Hardy (3)
5190. The Aesthetic Movement (3)
5270. Contemporary Poetry (3)
5390. Advanced Studies in Science Fiction and Fantasy (3)
5410. Pre-Shakespearean Drama (3)
5460. Early Twentieth-Century Poetry (3)
5740. Modern Prose Literature (3)
Certificate in Urban Design

Note: Students will not be admitted into this certificate program after spring, 2011. This certificate provides students with specialized competencies in urban design and prepares them to engage effectively in professional practice in the public and the private sectors. The certificate is open to students pursuing an undergraduate degree at ECU. Students gain interdisciplinary knowledge regarding physical, environmental, and social planning issues that confront contemporary cities. The course of study for the certificate enhances the creative, visualization, and graphic abilities required for the design and planning professions. Students engage in real-world design projects that deal with adaptive reuse, streetscapes, urban regeneration, downtown revitalization, historic preservation, public squares, and smart community planning. To qualify for the award, students must maintain a minimum of 3.0 GPA in the certificate courses. The certificate requires a minimum of **15 s.h.** of credit as follows:

1. Core Courses:
   - PLAN 4003. Urban Form and Design (3) (S)
   - PLAN 4046. Planning and Design Studio (3) (F,S)
   - PLAN 4050. World Architecture and Urbanism (3) or PLAN 5985. Historic Preservation Planning (3)

2. Elective Courses (two courses from the following):
   - ART 4950. Twentieth-Century Architecture (3) P: ART 1906, 1907
   - DESN 3030, 3031. Architectural Drafting (3,0) (F) (P: DESN 2036 or IDSN 2281; ITEC 2080; or program coordinator approval)
   - DESN 3038, 3039. Sustainable Design (3, 0) (S) (P: BIOL 1060, 1061; DESN 3030; GEOL 1700; ITEC 2090, 3300; PSYC 3241; or program coordinator approval)
   - GEOG 3004. Urban Geography (3) (F)
   - IDSN 4750. Interior Design for Adaptive Reuse (3) (WI) (S) (P: IDSN 3600, 3700) (Formerly IDMR 4750).
   - PLAN 3020. Environmental Planning (3) (F) (for non-Planning majors and minors)
   - PLAN 3051. Introduction to GIS in Planning (3) (F,S) (for non-Planning majors and minors)
   - PLAN 4021. Advanced GIS Applications in Planning (3)
   - PLAN 4050. World Architecture and Urbanism (3)
   - PLAN 5985. Historic Preservation Planning (3)
BS in Geographic Information Science and Technology

Minimum degree requirement is 126 s.h. of credit as follows:

1. Foundations curriculum (See Section 4, Foundations Curriculum Requirements for All Baccalaureate Degree Programs), including those listed below - 42 s.h.

   COMM 2410. Public Speaking (3) (F,S,SS) (FC:FA) or COMM 2420. Business and Professional Communication (3) (F,S,SS) (FC:FA)
   MATH 1065. College Algebra (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or math section of the SAT/ACT)

2. Common Core - 31 s.h.

   GEOG 2400. Spatial Data Analysis (3) (F,S)
   GEOG 2410. Fundamentals of GIS (3) (F,S) (Formerly GEOG 3410) or PLAN 3051. Introduction to GIS in Planning (3) (F)
   GEOG 3420. Remote Sensing of the Environment I (3) (F) (P: GEOG 2410 or equivalent)
   GEOG 3430. Geographic Information Systems I (3) (F,S) (P: GEOG 2410 or equivalent)
   GEOG 3450. Introduction to the Global Positioning System (3) (S) (P: GEOG 2410 or equivalent)
   GEOG 3460. GIS Applications Programming (3) (F) (P: GEOG 2410; BITE 2212 or CSCI 1610 or ITEC 2000 or MIS 2223 or consent of instructor)
   GEOG 4410. Advanced Cartographic Design and Production (3) (F,S) (P: GEOG 2410 or equivalent)
   GEOG 4420. Remote Sensing II (3) (S) (P: GEOG 3420 or consent of instructor)
   GEOG 4430. Geographic Information Systems II (3) (S) (P: GEOG 3430 or consent of instructor)
   GEOG 4450. GIScience, Society, and Technology (3) (S) (P: GEOG 2410, 3420, 3430; or consent of instructor)
   GEOG 4999. Geography Professional Seminar (1) (F, S) (P: Consent of instructor)

3. GIS electives (Choose from the following) - 6 s.h.

   GEOG 4150. Advanced Spatial Analysis (3) (F) (Formerly GEOG 3400) (P: GEOG 2400, 2410; or consent of instructor)
   GEOG 4440. Coastal Applications of GIS (3) (F,S) (P: GEOG 2250, 2410; or consent of instructor)
GEOG 4460. Digital Terrain Analysis (3) (F) (P: GEOG 2250, 2410; or consent of instructor)
GEOG 4540. Coastal Storms (3) (F) (P: GEOG 1300; or consent of instructor)
GEOG 4580. Radar and Satellite Meteorology (3) (P: GEOG 1300, 3420; or consent of instructor)
GEOG 4491,4492,4493. Supervised Study in Geographic Techniques (1,2,3) (F,S,SS) (P: Consent of instructor)
GEOG 4801, 4802, 4803. Geography Internship (1,2,3) (F,S,SS) (P: Consent of director of geography internships; consent should be obtained during the semester prior to the internship) A maximum of 3 s.h. can be used to meet the degree requirement.
PLAN 4021. Advanced GIS Applications in Planning (3) (S) (P: PLAN 3051 or GEOG 2410 or consent of instructor)

4. Environmental and Human Geography (Choose from the following; a minimum of 3 s.h. must be above 2999) - 15 s.h.

GEOG 1300. Weather and Climate (4) (F,S,SS) (FC:SC)
GEOG 2003. Geography of the Global Economy (3) (F,S) (FC:SO)
GEOG 2019. Geography of Recreation (3) (F) (FC:SO)
GEOG 2250. Earth Surface Systems (3) (F)
GEOG 2300. Geography of Environmental Resources (3) (F)
GEOG 2350. Climate Change: Science and Society (3) (FC:SO)
GEOG 3001. Historical Geography of the United States (3)
GEOG 3003. Political Geography (3) (WI) (S) (FC:SO)
GEOG 3004. Urban Geography (3) (F)
GEOG 3049. Latin America (3) (WI*) (FC:SO)
GEOG 3050. Africa (3) (WI) (S) (FC:SO)
GEOG 3051. Asia (3) (S) (FC:SO)
GEOG 3220. Soil Properties, Surveys, and Applications (3) (F) (P: GEOG 2250)
GEOG 3230. Global Climates (3) (S) (P: GEOG 1300, MATH 1065; or consent of instructor)
GEOG 3250. Environmental Hazards (3) (F) (P: GEOG 1300 or 2250)
GEOG 3510. Physical Meteorology (3) (F) (P: GEOG 1300, MATH 1065; or consent of instructor)
GEOG 4210. Fluvial and Hydrological Processes (3) (S) (P: GEOG 1300, 2250; or consent of instructor)
GEOG 4220. Coastal Geography (3) (WI) (S) (Formerly GEOG 3002) (P: GEOG 1300, 2250; or consent of instructor)
GEOG 4230. Earth Surface Processes (3) (WI) (F) (P: GEOG 1300, 2250; or consent of instructor)
GEOG 4270. Water Resources Management and Planning (3) Same as PLAN 4270 (P: GEOG 1000 or 1250; or PLAN 1900)
GEOG 4310. Geography of Transportation and Trade (3) (S) (P: GEOG 2003)
GEOG 4315. Geographic Images (3) (F) (FC:SO) (Formerly GEOG 3300)
GEOG 4320. Gender, Economy, and Development (3) (S) (P: Consent of instructor)
GEOG 4325. Resources, Population, and Development (3) (WI) (Formerly GEOG 3000) (P: GEOG 2003 or consent of instructor)
GEOG 4330. Agricultural Geography (3) (WI*) (F)
GEOG 4335. Geography of Tourism (3)
GEOG 4345. Human Migration and Global Restructuring (3) (F)
GEOG 4510. Meteorological Instruments and Observation (3) (F) (P: GEOG 1300, MATH 1065; or consent of instructor)
GEOG 4530. Micrometeorology (3) (F) (P: GEOG 1300; or consent of instructor)
GEOG 4560. Urban Climatology (3) (F) (P: GEOG 1300; or consent of instructor)
GEOG 4570. Hydrometeorology (3) (S) (P: GEOG 1300; or consent of instructor)
GEOG 4590. Tropical Meteorology (3) (F) (P: GEOG 1300; or consent of instructor)

5. Cognates (Choose from the following) - 21 s.h.

CSCI 1001. Introduction to Computer Science (3) (F,S)
CSCI 2310, 2311. Algorithmic Problem Solving and Programming Laboratory (4,0) (F,S) (P: MATH 1065; C for 2310: CSCI 2311; C for 2311: CSCI 2310) CSCI/MATH 2427.
CSCI 2600. Introduction to Digital Computation (3) (S) (P: MATH 1065 or 1066)
CSCI 3200. Data Structures and Their Applications (4) (F) (P: CSCI 2310, 2311)
CSCI 3700. Database Management Systems (3) (F,S) (P: CSCI 3200 or 3310)
ICTN 1500, 1501. PC Hardware Information and Computer Technology Fundamentals (3,0) (F,S) (P: MATH 1065 or higher)
ICTN 2000. Introduction to Telecommunications (3) (F)
ICTN 2154, 2155. Digital Communication Systems (3,0) (F,S) (P: ICTN 1500)
ICTN 2158, 2159. Computer Networking Technology (3,0) (F,S) (P: ICTN 2154)
ICTN 2510, 2511. Network Environment I (3,0) (F) (P: ICTN 1500)
ICTN 2530, 2531 Network Environment II (3,0) (F,S) (Formerly ICTN 3530, 3531) (P: ICTN 1500)
ICTN 2900, 2901. Introduction to Network Security (3,0) (F) (P: ICTN 2154)
ICTN 3540, 3541. Network Environment III (3,0) (F) (P: ICTN 2510, 3530)
MATH 1066. Applied Mathematics for Decision Making (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test or approval of the dept chair)
MATH 1083. Introduction to Functions (3) (F,S,SS) (FC:MA) (P: MATH 1065 with a minimum grade of C)
MATH 2119. Elements of Calculus (3) (F,S,SS) (FC:MA) (P: MATH 1065 with a minimum grade of C)
MATH 2127. Basic Concepts of Mathematics (3) (F,S,SS) (FC:MA) (P: Appropriate score on math placement test)

6. Electives to complete requirements for graduation - 11 s.h.