Notice

Complete and correct proposals/packages were placed on this agenda in the order in which they were received and availability of time.

The Committee devotes the necessary time to thoroughly review each package; therefore, presentation times are approximate and may vary. Your patience is appreciated.

Minutes Approval Date: 12/13/2018

Section I - Meeting Agenda

<table>
<thead>
<tr>
<th>Agenda Items*</th>
<th>I. Call to Order/Announcements (Jean-Luc Scemama)</th>
<th>2:00</th>
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<tr>
<td></td>
<td>• Vote on November 8, 2018 minutes</td>
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<tr>
<th></th>
<th>College of Health and Human Performance</th>
<th>2:05</th>
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<tr>
<td></td>
<td>Department of Human Development and Family Science (Barbara Brehm)</td>
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<tr>
<td>I.</td>
<td>1. Memorandum of Request</td>
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<tr>
<td></td>
<td>2. Revision of an Existing Program: Birth Through Kindergarten (B-K) Teacher Education, BS (Level 1)</td>
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### Section II - Meeting Minutes

<table>
<thead>
<tr>
<th>Date</th>
<th>Minutes</th>
</tr>
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<tbody>
<tr>
<td>11/29/2018</td>
<td>✔️ Minutes</td>
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</table>

**Attendance**
- Bellacero, Cynthia*
- Bowman, Josie*
- Dembo, Jonathan*
- Ferguson, Kenneth*
- Jordan, Debra*
- Kean, Linda*
- Kidd, Susan*
- Scemama, Jean-Luc*
- Spalding, Nancy*
- Vail-Smith, Karen*
- Weiss, Stacy*
- SGA Rep*
- Baker, Rachel
- Coltraine, Diane
- Summey, Karen
- Traynor, Karen

**Guests/Comments**
### I. Call to Order/Announcements

**Call to Order/Announcements**  
(Jean-Luc Scemama)

- Vote on November 8, 2018 minutes

  Motion to approve by Debra Jordan and seconded by Linda Kean. Approved unanimously.

- Memorandum of Request instructions

  Dr. Scemama noted that the current instructions to faculty planners regarding the memorandum of request did not require any sentences to summarize the intent of the package, and that faculty planners were currently presenting that information in the justification in the individual forms. He encouraged committee members to consider whether this presented any problems and whether they would like it changed, and if so, that it is something that could be recommended in the final meeting.

- Due to scheduling conflicts for one of the presenters, items II and III on the agenda for this meeting will switch places.

### II. College of Health and Human Performance  
Department of Human Development and Family Science  
(Eboni Baugh, Susannah Berry)

1. **Memorandum of Request**

   The proposal involved edits to the curriculum plan to clarify requirements for students and remove a course with redundant information (HDFS 4390).

   1. Revision of an Existing Program: Family and Community Services, BS *(Level 1)*

      Committee members asked what would be done with HDFS 4390, given the overlap in information with another course. Dr. Baugh explained that the faculty were in the process of revising HDFS 4390 to make it more distinct from HDFS 3215.

      Motion to approve by Debra Jordan and seconded by Karen Vail-Smith. Approved unanimously.

### III. College of Health and Human Performance  
Department of Human Development and Family Science  
(Barbara Brehm)

1. **Memorandum of Request**

   Changes to the requirements for the Educator Preparation Program
Professional Core allowed for programs to choose between EDUC 3200 or 4400 instead of requiring both. The faculty decided to keep 3200 because the content of 4400 is covered in other courses.

1. Revision of an Existing Program: Birth Through Kindergarten (B-K) Teacher Education, BS (Level 1)

No changes required to this package.

Motion to approve was made and passed unanimously.

IV.

College of Engineering and Technology
Department of Technology Systems
(Philip Lunsford)

1. Memorandum of Request

The proposal involves reducing the program from 126 hours to 120 hours. This is achieved by removing two courses and ensuring that any remaining courses did not use those as pre-requisites. Two additional edits were made which included addition of a new course (ICTN 4230) to the Industrial Technology, BS. The committee noted that the memo was clear.

2. Proposal of a New Course: ICTN 4230 - Advanced Enterprise Server Programming (Level 1* - requires Faculty Senate review)

The course was reviewed by an industry advisory group to insure that the current content was included.

3. Revision of Existing Courses: ICTN 2732, 4600, 4601, ITEC 3200, 3300, 3800 (Level 1)

No suggested edits.

4. Revision of Existing Programs:

- Industrial Technology, BS (Level 1)
- Information and Computer Technology, BS (Level 3)

No suggested edits.

Motion to approve by Karen Vail Smith and seconded by Stacy Weiss. Approved unanimously.

V.

Harriot College of Arts and Sciences
Department of Mathematics
(Gail Ratcliff)

1. Memorandum of Request

An overview of request presented, in which Dr. Ratcliff explained that the new MATH 1064 course that was approved last year would need to be added as an
allowed prerequisite in several existing MATH courses. Some suggested edits to the memorandum were made during the meeting.

2. Revision of Existing Courses: MATH 2119, 2228, 2283 (Level 1)

No suggested edits.

Motion to approve by Karen Vail Smith and seconded by Jonathan Dembo. Approved unanimously.
Section II - Program Justification

| Primary CIP Code* | 13.1209 |

Section III - Catalog Information

<table>
<thead>
<tr>
<th>Department*</th>
<th>Department of Human Development and Family Science</th>
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</thead>
<tbody>
<tr>
<td>Program Title*</td>
<td>Birth Through Kindergarten (B-K) Teacher Education, BS</td>
</tr>
<tr>
<td>Degree Type*</td>
<td>Bachelor of Science</td>
</tr>
<tr>
<td>Program Type*</td>
<td>Bachelors</td>
</tr>
</tbody>
</table>

Program Description*

*Program Coordinator: Barbara Brehm (120-W Rivers Building; 252-328-1322; brehmb@ecu.edu)*

Freshmen may declare birth through kindergarten (BK) teacher education as their major. Transfer students must have completed at least 12 s. h. at East Carolina University with a minimum cumulative grade point average (GPA) of 2.7 to declare. Prior to enrolling in selected courses, all BK majors must be admitted to the Upper Division of Teacher Education. Requirements for admission to upper division include, but are not limited to, satisfactory scores on all parts of PRAXIS Core, a minimum cumulative GPA of 2.7, and demonstration of computer competency. In addition, BK majors must achieve a minimum grade of C (2.0) in all courses required for the major. Students earning less than a C (2.0) in a prerequisite major course must repeat the course before the subsequent upper-level course may be taken.

A semester-long internship is the culminating experience for BK Teacher Education majors. Applications for admission to internship (HDFS 4324, 4325) must be submitted to the internship coordinator one year prior to the semester in which the student will complete internship requirements. Prior to internship, BK majors must have completed the following courses with a minimum grade of C (2.0): HDFS 1103, 2000, 2001, 2123, 2124, 3150, 3306, 3321, 4121, 4122,
4123, 4200, 4201, 4300, 4320; EDTC 4001; EDUC 3002, 3200; READ 3301; SPED 2000. Students who successfully complete all requirements and have a minimum cumulative GPA of 2.7 are recommended for BK licensure. A minimum grade of C (2.0) in internship is required for licensure. Additional information about upper division, internship, and NC teacher licensure can be found in the College of Education section of this catalog and in the handbook, Welcome to Teacher Education.

The birth through kindergarten (BK) teacher education program is offered both on-campus and online. Online delivery is designed as a 2+2 degree-completion program that is administered in cohorts. To be admitted to a distance education (DE) cohort, individuals must first be admitted to ECU and contact the DE coordinator for admission to the BS BK DE cohort. Criteria for admission to the BS BK DE cohort include completion of all general education requirements, passing scores on all parts of PRAXIS Core (or designated SAT or ACT scores,) computer competency, and reliable Internet access. The BS in BK teacher education program requires on-campus attendance for orientation, admission to upper division interviews, and senior-year internship seminars.

Minimum degree requirement is 120 s. h. of credit as follows:

### 1. General education requirements including those listed below - 40 s.h.

(For information about courses that carry general education credit see General Education Program.)

MATH 1065 College Algebra
[Right] or
MATH 2127 Basic Concepts of Mathematics
[After]
PSYC 1000 Introductory Psychology
[After] Choose a biological science (GE:SC)
[After] Choose a history course (GE:SO)
[After] Choose a literature course (except children's literature) (GE:HU)
[After] Choose a physical science (GE:SC)

### 2. Professional studies-32 29 s. h.

HDFS 2123 Early Experience in Birth through Kindergarten Education
HDFS 4123 Learning Environments and Teaching Methods in Early Childhood Education
3. Specialty area studies - 45 s.h.

- HDFS 1103 Marriage and Family Relations
- HDFS 2000 Child Development I: Prenatal Through Early Childhood
- HDFS 2001 Child Development II: Middle Childhood Through Young Adulthood
- HDFS 2124 Interaction Techniques for Working with Young Children
- HDFS 3150 Introduction to Early Childhood Intervention
- HDFS 3306 Guiding Children's Behavior
- HDFS 3321 Infant and Toddler Curriculum
- HDFS 3715 Global Perspectives in Early Childhood
- HDFS 4121 Social Studies, Math, and Science Curriculum in Early Childhood
- HDFS 4122 Language and Literacy Curriculum in Early Childhood
- HDFS 4200 Assessing Development and Learning in the Early Childhood Classroom
- HDFS 4201 Assessment for Intervention
- HDFS 4300 Birth through Kindergarten Curriculum Adaptations for Diverse Learners
- HDFS 4320 Practicum in Teaching Birth-Kindergarten in the Public Schools
- HDFS 4406 Parent-Professional Collaboration
- HDFS 4408 Administration of Programs for Young Children

4. Advisor approved electives to complete requirements for graduation.
Section II - Program Justification

Primary CIP Code* 19.0707

Section III - Catalog Information

Department* Department of Human Development and Family Science

Program Title* Family and Community Services, BS

Degree Type* Bachelor of Science

Program Type* Bachelors

Program Description* Program Coordinator: Eboni Baugh (336-W Rivers Building; 252-328-5714; bauge@ecu.edu)

Freshmen may declare family and community services as their major. Students must achieve and maintain a cumulative 2.5 GPA to remain in the program. Transfer students must have completed at least 12 s.h. at East Carolina University and a minimum GPA of 2.5 to declare. In addition, students must achieve a minimum grade of C (2.0) in all HDFS courses required for the major. Students earning less than a C (2.0) in a prerequisite major course must repeat the course before the subsequent upper level course may be taken.

Students in family community services may select one of two concentrations: family science or child development. The family science concentration is intended for those interested in work with community agencies that provide a broad array of services to families. The child development concentration is intended for those interested in work with community agencies that provide a variety of services to children. (Note: Students who meet course requirements for the certification in family life education must make application to the National Council on Family Relations. The Department of Human Development and Family Science will verify completion of degree requirements, but meeting other requirements for certification is the responsibility of each student.)
Minimum degree requirement is 120 s.h. of credit as follows:

1. General education requirements including those listed below - 40 s.h.

   (For information about courses that carry general education credit see General Education Program.)

   COMM 2020 Fundamentals of Speech Communication
   [Right] or
   COMM 2410 Public Speaking
   [After]
   PSYC 1000 Introductory Psychology

2. Core-28 31 s. h.

   HDFS 1103 Marriage and Family Relations
   HDFS 2000 Child Development I: Prenatal Through Early Childhood
   HDFS 2001 Child Development II: Middle Childhood Through Young Adulthood
   HDFS 3002 Child in the Family
   HDFS 2280 Introduction to Child, Family, and Community Services
   HDFS 3306 Guiding Children’s Behavior
   HDFS 3560 Exploring Professions and Practices in Family Science
   HDFS 4000 Introduction to Child and Family Research
   HDFS 4303 Families and Cultural Diversity
   HDFS 4366 Family Life Education
   HDFS 4380 Grant Writing, Fundraising, and Leadership Development
   HDFS 4410 Professional Seminar

3. Concentrations - 35 s.h.

   (Choose one of the following.)

   Family science
HDFS 2001 Child Development II: Middle Childhood Through Young Adulthood
HDFS 2400 Introduction to Gerontology
HDFS 3002 Child in the Family
HDFS 3215 The Family As Consumers
HDFS 4006 Families, Sexuality, and Gender Roles
HDFS 4007 Public Policy and Legal Issues Affecting Families
HDFS 4390 Family Resource Management
HDFS 4313 Trends and Issues in Family Studies
HDFS 4991 Family Science Internship
[After] 5 8 s. h. of advisor-approved HDFS electives

Child development

HDFS 2124 Interaction Techniques for Working with Young Children
HDFS 3150 Introduction to Early Childhood Intervention
HDFS 3306 Guiding Children's Behavior
HDFS 3321 Infant and Toddler Curriculum
[Before]
HDFS 4121 Social Studies, Math, and Science Curriculum in Early Childhood
[Right] or
HDFS 4122 Language and Literacy Curriculum in Early Childhood
[After]
HDFS 4200 Assessing Development and Learning in the Early Childhood Classroom
[Right] or
HDFS 4201 Assessment for Intervention
[After]
HDFS 4300 Birth through Kindergarten Curriculum Adaptations for Diverse Learners
HDFS 3600 Play in the Lives of Children
HDFS 3715 Global Perspectives in Early Childhood
HDFS 4406 Parent-Professional Collaboration
HDFS 4408 Administration of Programs for Young Children
HDFS 4992 Child Development Internship
6 s. h. of advisor-approved HDFS electives
4. Minor or general electives to complete requirements for graduation.
## Section II - Course Information

<table>
<thead>
<tr>
<th>Course Prefix*</th>
<th>ICTN</th>
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<tbody>
<tr>
<td>Course Number*</td>
<td>4230</td>
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<table>
<thead>
<tr>
<th>Course Title*</th>
<th>Advanced Enterprise Server Programming</th>
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<tbody>
<tr>
<td>Credits</td>
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<tr>
<td>Service Learning</td>
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<tr>
<td>Writing Intensive</td>
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<td>When Offered</td>
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<td>General Education (GE) Curriculum</td>
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<tr>
<td>Diversity (DD/GD)</td>
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<tr>
<td>Formerly</td>
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<tr>
<td>Same as</td>
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</table>

### Lecture/Lab/Studio Contact Hours

### Note

**Prerequisite**
ICTN 3220.

**Recommended prerequisite**

**Corequisite**

**Recommended corequisite**

**Prereq/Coreq**

**Recommended**
Course Description*  Advanced enterprise server structured programming including multidimensional arrays, record input, record sorting, input and output techniques, and database manipulation.

College/School*  College of Engineering and Technology

Course Prefix and Number (Ex. ABCD 1234)*  ICTN 4230

Course Discipline*  Information and Computer Technology

Section IV - Additional Course Information

Method(s) of Delivery CURRENT or PROPOSED*  08 Internet or world wide web (does not have dedicated physical space and meeting times except for testing and/or examination periods)

Method(s) of Delivery FUTURE*  01 Face-to-face (regular face-to-face meeting times and dedicated physical space at ECU)

08 Internet or world wide web (does not have dedicated physical space and meeting times except for testing and/or examination periods)

Select Primary Instructional Format  04 Lecture requires the extended expression of thought supported by generally-accepted principles or theorems of a field or discipline led by an expert or qualified representative of the field or discipline.

Contact Hours  3

Select one:  Weekly

(Optional) Additional Instructional Format

Contact Hours

Select one:
### Section II - Course Information

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<tr>
<td>ICTN</td>
<td>4600</td>
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**Course Title**: Enterprise Information Technology Management

**Credits**: 3

**Service Learning**

**Writing Intensive**

**When Offered**: S

**General Education (GE) Curriculum**

**Diversity (DD/GD)**

**Formerly**

**Same as**

**Lecture/Lab/Studio/Contact Hours**: 2 lecture hours per week.

**Note**: 2 lecture and 2 lab hours per week.
**Prerequisite**  ICTN 2154, 2150, ICTN 2530;

**Recommended prerequisite**

**Corequisite**  ICTN 4601.

**Recommended corequisite**

**Prereq/Coreq**

**Recommended prereq/coreq**

**Course Description**  Case studies on various issues about enterprise IT management.

**School/College**  College of Engineering and Technology

**Course Prefix AND Number (Ex. ABCD 1234)**
ICTN 4600

**Department**  Department of Technology Systems

**Course Discipline**  Information and Computer Technology
# Section II - Course Information

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<tr>
<td>ICTN</td>
<td>4601</td>
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**Course Title** Enterprise Information Technology Management Laboratory

**Credits** 0

**Service Learning**

**Writing Intensive**

**When Offered** S

**General Education (GE) Curriculum**

**Diversity (DD/GD)**

**Formerly**

**Same as**

**Lecture/Lab/Studio/Contact Hours:** 2 lab hours per week.

**Note** 2 lecture and 2 lab hours per week.

**Prerequisite** ICTN 2154 2150, ICTN 2530;

**Recommended prerequisite**

**Corequisite** ICTN 4600.

**Recommended corequisite**

**Prerek/Coreq**
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<td><strong>Course Description</strong></td>
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<td>Case studies on various issues about enterprise IT management.</td>
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<td>Information and Computer Technology</td>
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<td>ITEC</td>
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| Course Title*  | Introduction to Statistical Process Control |

| Credits*       | 3 |

| Service Learning |  |
| Writing Intensive |   |

| When Offered | F,S |

| General Education (GE) Curriculum |   |

| Diversity (DD/GD) |   |

| Formerly |   |

| Same as |   |

| Lecture/Lab /Studio/Contact Hours: |   |

| Note |   |

**Prerequisite**  
MATH 1065 or MATH 1066; ITEC 2000 or ITEC 3000 or MIS 2223.

**Recommended prerequisite**  

**Corequisite**  

**Recommended corequisite**  

**Prereq/Coreq**  

**Recommended**  

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<th>prereq/coreq</th>
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<tr>
<td><strong>Course Description</strong></td>
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<td><strong>Course Prefix AND Number (Ex. ABCD 1234)</strong></td>
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<tr>
<td><strong>Course Discipline</strong></td>
<td>Industrial Technology</td>
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</table>
# Technology Systems - UG - Lunsford - ITEC 3300

**C - SHORT Course Revision Form**

## Section II - Course Information

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<tr>
<th>Course Title*</th>
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<td>Credits*</td>
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**Service Learning**

**Writing Intensive**

**When Offered**

F,S

**General Education (GE) Curriculum**

**Diversity (DD/GD)**

**Formerly**

**Same as**

**Lecture/Lab/Studio/Contact Hours:**

3 lecture hours per week.

**Note**

**Prerequisite**

ENGL 2201, ITEC 2000 or ITEC 3000 or MIS 2223.

**Recommended prerequisite**

**Corequisite**

**Recommended corequisite**

**Prereq/Coreq**
<table>
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<tbody>
<tr>
<td><strong>Course Description</strong></td>
<td>Systems needs analysis identification, functional requirements analysis, IT project timelines, and system development progress metrics.</td>
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<tr>
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<td>College of Engineering and Technology</td>
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<td><strong>Course Prefix AND Number (Ex. ABCD 1234)</strong></td>
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<td><strong>Course Discipline</strong></td>
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<th>Course Title*</th>
<th>Cost and Capital Project Analysis</th>
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<tr>
<td>Credits*</td>
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- **Service Learning**
- **Writing Intensive**

- **When Offered**  
  - F;S

- **General Education (GE) Curriculum**

- **Diversity (DD/GD)**

- **Formerly**

- **Same as**

<table>
<thead>
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<th>Lecture/Lab /Studio/Contact Hours:</th>
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</table>

- **Note**

**Prerequisite**  
MATH 1065; **ITEC 2000 or ITEC 3000 or MIS 2223**.

**Recommended prerequisite**

**Corequisite**

**Recommended corequisite**

**Prereq/Coreq**

**Recommended**
<table>
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<tr>
<th>Course Description*</th>
<th>Economic analysis of technology alternatives. Valuation techniques, time value of money, cash flow analysis, cost estimation, taxes and depreciation, operations planning and control, project evaluation, accounting and budgeting tools.</th>
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<td>College of Engineering and Technology</td>
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<tr>
<td>Course Prefix AND</td>
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<tr>
<td>Course Discipline*</td>
<td>Industrial Technology</td>
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</tbody>
</table>
Technology Systems - UG - Lunsford - Industrial Technology, BS

D - Program Revision Form

Section II - Program Justification

Primary CIP Code* 15.0612

Section III - Catalog Information

Department* Department of Technology Systems

Program Title* Industrial Technology, BS

Degree Type* Bachelor of Science

Program Type* Bachelors

Program Description* Program Coordinator: David Batts (230 Slay Building; 252-328-9673; battsd@ecu.edu)

The bachelor of science in industrial technology is accredited by the Association of Technology, Management, and Applied Engineering and is a degree completion curriculum designed for students who have been awarded a qualified associate in applied science degree in an industrial or technical related field. Students accepted to ECU may declare an intent to enroll in the bachelor of science in industrial technology program, but must apply for admission to a specific concentration. Students not yet accepted into this program will not be allowed to enroll in concentration courses. Acceptance into the program may require additional qualifications such as industry certifications and additional courses depending on the chosen concentration, the earned associate in applied science degree, and the student's background. 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. Students must complete a minimum of 42 s.h. of upper division core and concentration courses at ECU. Students can transfer up to half (60 s.h.) of the total hours of the degree program (120 s.h.) from the community college. Those ECU students intending to transfer to a technology systems degree program from other campus programs must have at least a 2.0 GPA.

Minimum degree requirement is 120 s.h. of credit as follows:


1. General education requirements including those listed below - 40 s.h.

(For information about courses that carry general education credit see General Education Program.)

ECON 2113 Principles of Microeconomics
[MATH 1065 College Algebra]
[Right] or
MATH 1066 Applied Mathematics for Decision Making
[After]
PSYC 1000 Introductory Psychology
PSYC 3241 Personnel and Industrial Psychology

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
ITEC 3290 Technical Writing
ITEC 3300 Technology Project Management
ITEC 3800 Cost and Capital Project Analysis
ITEC 4293 Industrial Supervision

4. Concentrations - 27 s.h.

(Choose one.)

Architectural design technology concentration:

DESN 3030 Architectural Drafting
DESN 3031 Architectural Drafting Laboratory
Bioprocess manufacturing concentration:

ITEC 3292 Industrial Safety
ITEC 4150 Microbiology for Industrial Processing
ITEC 4250 Engineering for Food Safety and Sanitation
ITEC 4300 Quality Assurance Concepts
ITEC 4350 Separation Techniques for Industrial Processing
ITEC 4450 Waste Treatment Techniques for Industrial Processing
ITEC 4550 Quality in Regulatory Environment
[After] Approved technical electives (6 s.h.)

Distribution and logistics concentration:

Choose 3 s.h. of approved technical electives
Choose 24 s.h. of advisor approved IDIS courses from below:

IDIS 2771 Introduction to Distribution and Logistics
IDIS 2830 ERP Systems for Distributors
IDIS 3700 Transportation Logistics
IDIS 3790 Technical Presentations
IDIS 3795 Distributor Sales and Branch Management
IDIS 3796 Distributor Sales and Branch Management Laboratory
IDIS 3815 Supply Chain Logistics
IDIS 3835 Security and Risk Analysis for Distributors
IDIS 3840 Procurement Logistics and Inventory Control
IDIS 3850 Warehousing and Materials Handling
IDIS 3851 Warehousing and Materials Handling Laboratory
IDIS 4600 Strategic Global Sourcing for Distributors
IDIS 4785 Strategic Pricing for Distributors
IDIS 4790 Global Logistics
IDIS 4800 Distribution and Logistics Internship
IDIS 4802 Distribution and Logistics Research

### Health information technologies concentration:

- HIMA 3000 Medical Terminology for Health Professionals
- HIMA 3120 Health Care Delivery Systems
- HIMA 4030 Quality Management in Health Care
- HSMA 2000 Professional Roles and Environments in Health Care
- HSMA 3020 Health Care Payment Systems
- HSMA 3025 Professional Ethical Codes and Law in Health Care
- HSMA 3035 Interpersonal Team Skills for Health Care Supervisors and Practitioners
- HSMA 4010 Health Information Management

[After] Approved technical electives (3 s.h.)

### Industrial management concentration:

- IDIS 2771 Introduction to Distribution and Logistics
- IDIS 3790 Technical Presentations
- IDIS 3815 Supply Chain Logistics
- IENG 3300 Plant Layout and Materials Handling
- IENG 4023 Advanced Manufacturing Systems
- ITEC 3292 Industrial Safety
- ITEC 4300 Quality Assurance Concepts

[After] Approved technical electives (6 s.h.)

### Information and computer technology concentration:

(Choose 27 s.h. from the below courses.)

- ICTN 2530 Network Environment II
- ICTN 2531 Network Environment II Laboratory
- ICTN 2900 Fundamental Network Security
- ICTN 2901 Fundamental Network Security Laboratory
- ICTN 3210 Enterprise Server Technology
- ICTN 3220 Enterprise Server Programming
- ICTN 3250 Internetwork Routing Technology
- ICTN 3251 Internetwork Routing Technology
Laboratory ICTN 3410 IPv6 Fundamentals
ICTN 3540 Network Environment III
ICTN 3541 Network Environment III Laboratory
ICTN 3900 Web Services Management
ICTN 3901 Web Services Management Laboratory
ICTN 4040 Enterprise Information Security
ICTN 4064 Regulations and Policies
ICTN 4150 Switching Network Technology
ICTN 4151 Switching Network Technology Laboratory
ICTN 4200 Intrusion Detection Technologies
ICTN 4201 Intrusion Detection Technologies Laboratory
ICTN 4230 Advanced Enterprise Server Programming
ICTN 4250 Enterprise Network Security Technology
ICTN 4251 Enterprise Network Security Technology Laboratory
ICTN 4310 Digital Forensics
ICTN 4402 Special Topics
ICTN 4404 Special Topics
ICTN 4406 Special Topics
ICTN 4408 Special Topics
ICTN 4420 IPv6 Security
ICTN 4501 Laboratory Problems
ICTN 4503 Laboratory Problems
ICTN 4505 Laboratory Problems
ICTN 4520 Wireless Communication
ICTN 4521 Wireless Communication Laboratory
ICTN 4590 Network Maintenance and Troubleshooting
ICTN 4591 Network Maintenance and Troubleshooting Laboratory
ICTN 4600 Enterprise Information Technology Management
ICTN 4601 Enterprise Information Technology Management Laboratory
ICTN 4700 Virtualization Technologies
ICTN 4701 Virtualization Technologies Laboratory
ICTN 4750 Enterprise Data Storage Technologies
ICTN 4760 Cloud Infrastructure Services
ICTN 4800 Information Assurance Technologies
ICTN 4801 Information Assurance Technologies Laboratory

Industrial engineering technology concentration:

IENG 3300 Plant Layout and Materials Handling
IENG 4020 Manufacturing System Planning
IENG 4023 Advanced Manufacturing Systems
ITEC 4300 Quality Assurance Concepts

[After] Approved technical electives (9 s.h.)

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**Mechanical design technology concentration:**

DESN 3032 Engineering Graphics II
DESN 3033 Engineering Graphics II Laboratory
DESN 3230 Rapid Prototyping
DESN 3231 Rapid Prototyping Laboratory
DESN 3234 Jig and Fixture Design
DESN 3235 Jig and Fixture Design Laboratory
DESN 3236 Geometric Dimensioning and Tolerancing
DESN 3237 Geometric Dimensioning and Tolerancing Laboratory
IENG 2076 Introduction to Computer Numerical Control (CNC)
IENG 2077 Introduction to Computer Numerical Control (CNC) Laboratory
IENG 3020 Robotics in Computer Integrated Manufacturing
IENG 3021 Robotics in Computer Integrated Manufacturing Laboratory
IENG 3300 Plant Layout and Materials Handling
[After] Approved technical electives (6 s.h.)

---

5. Electives to complete requirements for graduation.
### Section II - Program Justification

| Primary CIP Code* | 11.0103 |

### Section III - Catalog Information

<table>
<thead>
<tr>
<th>Department*</th>
<th>Department of Technology Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Title*</td>
<td>Information and Computer Technology, BS</td>
</tr>
<tr>
<td>Degree Type*</td>
<td>Bachelor of Science</td>
</tr>
<tr>
<td>Program Type*</td>
<td>Bachelors</td>
</tr>
<tr>
<td>Program Description*</td>
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</table>
Program Coordinator: Philip Lunsford (123-C Science and Technology Building; 252-328-9670; lunsfordp@ecu.edu)

The bachelor of science in information and computer technology, accredited by the Association of Technology, Management, and Applied Engineering, prepares students for a career in information technology, computer networking, systems administration, cyber security, and technical management. Course work provides a sound base of information technology fundamentals and advanced work in internet working and client-server information systems. Much of the curricula is based on formal academy or curricular alliances with industry partners. Opportunities for industrial certifications with these companies are built into the curriculum.

The required courses also include foundational skills in supervision and management to prepare students to lead and work in teams, and to provide a platform for career advancement into leadership positions. Students are required to have an internship and to complete a two-semester professional capstone project. Additional opportunities to obtain further industry experience through co-op positions, course-based projects in the program, and by graduating with extra credentials, such as a minor in business administration are available.

Credit toward an information and computer technology major will not be given for any ICTN course with a grade less than C (2.0).

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

**Proposed Curriculum**

1. General education requirements including those listed below - 40 s.h.

   (For information about courses that carry general education credit see General Education Program.)

   ECON 2113 Principles of Microeconomics
   [After]
   MATH 1065 College Algebra
   [Right] or
   MATH 1066 Applied Mathematics for Decision Making
   [After]
   PHYS 1250 General Physics I
   PHYS 1260 General Physics II
   PHYS 1261 General Physics Laboratory II
   PSYC 1000 Introductory Psychology
   PSYC 3241 Personnel and Industrial Psychology

2. Lower division core-24 21 s. h.

   ICTN 1500 Information and Computer Technology Fundamentals
ICTN 1501 Information and Computer Technology Fundamentals Laboratory
ICTN 2154 Digital Communication Systems
ICTN 2155 Digital Communication Systems Laboratory
ICTN 2158 Computer Networking Technology
ICTN 2159 Computer Networking Technology Laboratory
ICTN 2510 Network Environment I
ICTN 2511 Network Environment I Laboratory
ICTN 2530 Network Environment II
ICTN 2531 Network Environment II Laboratory
ICTN 2732 Scripting for Information Technology
[After]
ITEC 2000 Industrial Technology Applications of Computer Systems
[Right] or
ITEC 3000 Internet Tools Technology

3. Upper division core - 26 s.h.

ICTN 2900 Fundamental Network Security
ICTN 2901 Fundamental Network Security Laboratory
ICTN 3540 Network Environment III
ICTN 3541 Network Environment III Laboratory
ICTN 4000 Network Internship
ICTN 4020 Senior Information and Computer Technology Capstone Design Project I
ICTN 4022 Senior Information and Computer Technology Capstone Design Project II
ICTN 4040 Enterprise Information Security
IDIS 3790 Technical Presentations
ITEC 3290 Technical Writing
ITEC 3300 Technology Project Management

4. Concentrations - 12 s.h.

(Choose one.)

Computer networking concentration:

ICTN 3250 Internetwork Routing Technology
ICTN 4250 Enterprise Network Security Technology Laboratory
ICTN 4950 Network Maintenance and Troubleshooting
ICTN 4951 Network Maintenance and Troubleshooting Laboratory

Information security concentration:

ICTN 4064 Regulations and Policies
ICTN 4200 Intrusion Detection Technologies
ICTN 4201 Intrusion Detection Technologies Laboratory
ICTN 4600 Enterprise Information Technology Management
ICTN 4601 Enterprise Information Technology Management Laboratory
ICTN 4800 Information Assurance Technologies
ICTN 4801 Information Assurance Technologies Laboratory

Information technology concentration:

ICTN 3900 Web Services Management
ICTN 3901 Web Services Management Laboratory
ICTN 4064 Regulations and Policies
ICTN 4520 Wireless Communication
ICTN 4521 Wireless Communication Laboratory
ICTN 4600 Enterprise Information Technology Management
ICTN 4601 Enterprise Information Technology Management Laboratory

5. Cognates-**12 9 s. h.**

FINA 2244 Legal Environment of Business
[After]
ITEC 3200 Introduction to Statistical Process Control
[Right] or
MATH 2283 Statistics for Business
[After]
ITEC 3800 Cost and Capital Project Analysis
6. Approved electives to complete requirements for graduation.
# Mathematics - UG - Benson - MATH 2119

C - SHORT Course Revision Form

## Section II - Course Information

<table>
<thead>
<tr>
<th>Course Prefix*</th>
<th>MATH</th>
</tr>
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<tbody>
<tr>
<td>Course Number*</td>
<td>2119</td>
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<tr>
<td><strong>Course Title</strong></td>
<td>Elements of Calculus</td>
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<td><strong>Credits</strong></td>
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<td><strong>When Offered</strong></td>
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<tr>
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<tr>
<td><strong>Diversity (DD/GD)</strong></td>
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<tr>
<td><strong>Formerly</strong></td>
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<tr>
<td><strong>Same as</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Lecture/Lab /Studio/Contact Hours:</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Note** May not receive credit for MATH 2119 after having received credit for a higher numbered calculus course.
<table>
<thead>
<tr>
<th><strong>Prerequisite</strong></th>
<th>Minimum grade of C- (1.7) in MATH 1064, or MATH 1065 or MATH 1066.</th>
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<tbody>
<tr>
<td><strong>Recommended prerequisite</strong></td>
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<tr>
<td><strong>Corequisite</strong></td>
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<tr>
<td><strong>Recommended corequisite</strong></td>
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<td><strong>Prereq/Coreq</strong></td>
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<tr>
<td><strong>Course Description</strong></td>
<td>Elementary differentiation and integration techniques. Proofs not emphasized.</td>
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<td><strong>School/College</strong></td>
<td>Thomas Harriot College of Arts and Sciences</td>
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<td><strong>Course Prefix AND Number (Ex. ABCD 1234)</strong></td>
<td>MATH 2119</td>
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<td><strong>Department</strong></td>
<td>Department of Mathematics</td>
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<tr>
<td><strong>Course Discipline</strong></td>
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<td><strong>Writing Intensive</strong></td>
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<td><strong>When Offered</strong></td>
<td>F,S,SS</td>
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<td><strong>Same as</strong></td>
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<tr>
<td><strong>Lecture/Lab/Studio/Contact Hours:</strong></td>
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<tr>
<td><strong>Note</strong></td>
<td>May receive credit for one of MATH 2228, 2283.</td>
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<tr>
<td><strong>Prerequisite</strong></td>
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<td><strong>Corequisite</strong></td>
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<td>Recommended prereq/coreq</td>
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<tr>
<td><strong>Course Description</strong></td>
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<tr>
<td>Sampling and probability distributions, measures of central tendency and dispersion, hypothesis testing, Chi-square, and regression.</td>
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<td><strong>School/College</strong></td>
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<td>Thomas Harriot College of Arts and Sciences</td>
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<td>Mathematics</td>
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