DEPARTMENT of COMPUTING
College of Business & Technology
EAST TENNESSEE STATE UNIVERSITY

Advisement Booklet
2023 – 2024

Department of Computing Undergraduate Advisement

Corey Dean
deancm2@etsu.edu

Ryan Oler
olerfr@etsu.edu

Department of Computing Administration

Dept. Chair Computing
Dr. Brian Bennett
bennettbt@etsu.edu

**Contact information is subject to change. For the most up to date information and a full listing of faculty and staff, please visit https://www.etsu.edu/cbat/computing/faculty_and_staff/.**
Degree Works

DEGREE NOW, NOT LATER

- **Degree Works** is an academic advising and degree audit tool that helps advisors and students track their degree progress in real-time!
- **Fully integrated with GoldLink,** Degree Works gives students an up-to-date, play-by-play of courses taken and courses needed to help them plan and complete their degree(s) on time!
- **Benefits and Features of Degree Works**
  - Provides real-time degree audit, history and information and allows for improved course and degree planning
  - Provides planning scenarios if you change majors, concentrations or plans
  - Improves Advisor communication for courses and requirements
  - GPA calculator - See how final grades may affect the overall GPA
  - Still Need Courses- Hyperlinks to information about the course, section and scheduling information
- "**What If..."** scenarios, allow students to experiment with changing majors or degree plans.
- Using the **Plans** tab, a student or advisor can create an academic plan either from scratch or using a template for the course of study.
- Use the Progress bars to keep up with your degree progress. The **requirements bar** includes course requirements, non-course requirements along with graduation requirements. The **credit bar** tracks the percentage of credits completed towards the 124 degree credit requirement.
- **Degree Works performs best when using browsers other than Microsoft Edge**
- You will not be cleared for graduation until completion of everything in your DegreeWorks.

**International Student Seminar – CBAT 4107/5107**

The College of Business and Technology (CBAT) offers this course to help orient, develop, and educate international students to aid their assimilation and acculturation, enhance their academic performance, improve their professional skills, and enhance their integration into the university community. The course provides international students with the knowledge and skills to engage successfully in their coursework, the College, the university community, the American Culture, and their chosen professions. The goals of the course are to: improve international students’ knowledge and skills to enhance their academic success, clarify expectations for academic tasks and professional behavior, address challenges unique to international students, and build a strong international student community within the College. Course topics include: academic expectations and ensuring academic integrity, how American academic and professional expectations differ from the students’ home culture, written and oral communications skills, teamwork skills, cultural intelligence, and cross-cultural competency and skills development.

**All students pursuing a degree from the College of Business and Technology on an international student visa (J-1 or F-1) are required to enroll in CBAT4107/5107 for their first semester ETSU and each subsequent semester until they have successfully completed 4 credit hours of International Student Seminar (CBAT 4107/CBAT 5107) as part of their undergraduate or graduate program.**

If you have questions about the International Student Seminar, please contact Dr. Karen Ann Tarnoff at 423-429-5299, tarnoffk@etsu.edu or CBATInternational@etsu.edu.
Bachelor of Science in Computing with concentrations in

- Cybersecurity and Modern Networks (CSMN)
- Computer Science (CS)
- Information Systems (IS)
- Information Technology (IT)

The four concentrations share a common core of courses that provides a strong background in programming, design, computer organization, database management, networking, security, and software engineering. All concentrations require a course in probability and statistics and in discrete mathematics. Concentrations emphasize practical skills needed to succeed in careers in computing, including practical skills for careers in computing, including technical skills, written and oral communication, project management, and teamwork. Graduates work in a wide variety of industries throughout the region, nation, and world at highly competitive salaries. Many graduates also complete advance degrees, including the department’s graduate program.

CYBERSECURITY AND MODERN NETWORKS (CSMN) – The CSMN concentration supplements the core curriculum with courses in secure software development and systems deployment; cloud, wireless, and mobile computing; and sensor-based (Internet of Things) computing. This concentration is designed for students who wish to pursue careers in computer security and in networking-enabled application development. This concentration is also recommended for those who plan to do graduate work in cybersecurity.

Admission to the Cybersecurity and Modern Networking concentration is by Departmental approval only. Students interested in the CSMN program are advised to enter the Computer Science concentration their freshman year. Students may apply for entrance to the CSMN concentration after having completed the foundational courses (more information on page 4).

COMPUTER SCIENCE (CS) - The CS concentration supplements the core curriculum with courses in data structures, algorithms, and computer architecture. Students apply their knowledge to the development of systems-level software programming, including real-time graphics simulations, distributed systems, and operating systems. This concentration is also recommended for those who plan to do graduate work in computer science.

INFORMATION SYSTEMS (IS) - The IS concentration supplements the core curriculum with courses in Enterprise Resource Planning (ERP) and enterprise system implementation and programming. Students select an emphasis in accountancy or management and explore the application of information systems in business process definition and execution. This concentration is designed for students who wish to apply their knowledge in enterprise information systems, business-oriented computing or within their emphasis area. This concentration is recommended for those who plan to do graduate work in information systems or business administration.

INFORMATION TECHNOLOGY (IT) - The IT concentration supplements the core curriculum with courses in web development, database and system administration, and human computer interaction. This concentration is designed for students who wish to apply their knowledge in these fields and for those who plan to do graduate work in information technology.

The undergraduate Computer Science, Information Systems, and Information Technology programs at ETSU are accredited by the Computing Accreditation Commission (CAC) of ABET, http://www.abet.org, an accrediting body recognized by the Council for Higher Education Accreditation (CHEA).

The Cybersecurity and Modern Networks concentration will be eligible for initial ABET review after the program has graduates.
Cybersecurity and Modern Networks (CSMN) Admission Policy

Admission to the Cybersecurity and Modern Networking concentration is by Departmental approval only.

Students interested in the CSMN program are advised to enter the Computer Science concentration their first year. Students may apply for entrance to the CSMN concentration after having completed the following foundational classes:

- CSCI 1250 Introduction to Computer Science I
- CSCI 1260 Introduction to Computer Science II
- CSCI 1900 Math for Computer Science
- CSCI 2150 Computer Organization
- CSCI 2210 Data Structures
- CSCI 3400 Networking Fundamentals
- MATH 1910 Calculus I
- MATH 2050 Foundations of Probability and Statistics – Calculus Based

As a part of the application process, students must commit to the cohort's requirements regarding class scheduling and present a statement of academic/career goals. A faculty committee will evaluate applicants based on their academic work to date, particularly in the foundation course set, and an assessment of their potential to achieve success in the program.

One cohort will be admitted each fall. To maintain good standing in the cohort, students must take and successfully complete all upper level program courses in one attempt. Students failing to do so will face extended time to graduate. In this situation, students may wish to transfer to another Computing concentration.

Any student not admitted to CSMN can work with their Advisor to complete the CS Concentration instead. This would still allow the student to graduate within 4 years.

Graduation Requirements

In order to complete the degree, a computing major must:

- Complete all courses with an overall GPA of 2.5 or better
- Complete all computing courses with a GPA of 2.5 or better
- Complete CSCI 1250 and CSCI 1260 with a grade of “B-” or better
- Complete all other major requirements with a grade of “C-” or better (this includes computing core, concentration courses, and all other courses from other departments that satisfy major requirements)
- Complete 124 credit hours Including:
  - ETSU General Education Requirements
  - Major Requirements
  - Any Additional Electives
- Complete the California Critical Thinking Skills Test (CCTST)
- Complete the Computing Senior Exam (CSE)

Students must complete every required course with the required final grade in at most three attempts. For the purpose of determining progress towards degree completion, a student's grade of record in a given course shall be the grade that was earned in that student's latest attempt at that course -- rather than any grades earned before this latest attempt. An attempt is defined as registering for and remaining enrolled in a course after the second week of the semester. Students should refer to the Academic Calendar at https://www.etsu.edu/etsu/academicdates.aspx for specific dates.

Computing majors and minors will be required to change their program of study if these requirements cannot be met.

No Minor is required
# 2022 – 2023 Gen. Ed. Requirements for Computing Majors (41-42 credit hours)

## Writing: 6 credit (Grade C or better for both)
- ENGL 1010 Critical Reading & Exp. Writing (3)
- ENGL 1020 Critical Thinking & Argument (3)

## Oral Communication: 3 credits
- COMM 2025 Fundamentals of Comm. (3)
- COMM 2045 Public Speaking (3)
- COMM 2055 Argumentation & Debate (3)

## Literature: 3 credits (select one)
- ENGL 2030 Literary Heritage (3)
- ENGL 2110 American Literature to 1865 (3)
- ENGL 2120 American Literature since 1865 (3)
- ENGL 2210 British Literature to 1785 (3)
- ENGL 2220 British Literature since 1785 (3)
- ENGL 2330 World Literature (3)
- ENGL 2430 European Literature (3)

## Fine Arts: 3 credits (select one)
- ARTA 1030 Art Appreciation (3 credits)
- ARTH 2010 Art History Survey I (3)
- ARTH 2020 Art History Survey II (3)
- BLUE 2150 American Roots Music (3)
- DANC 1500 Introduction to Dance (3)
- HUMT 2310 Arts & Ideas I (3)
- HUMT 2320 Arts & Ideas II (3)
- MUSC 1030 Introduction to Music (3)
- MUSC 1035 History of Jazz (3)
- THEA 1030 Introduction to Theater (3)

## Humanities: 3 credits (select one)
- ENGL 3150 Lit., Ethics, and Values (3)
- ENGL 3280 Mythology (3)
- ENTC 3020 Technology and Society (3)
- HIST 1110 World History to 1500 (3)
- HIST 1120 World History since 1500 (3)
- PHIL 1030 Introduction to Philosophy (3)
- PHIL 2020 Introduction to Ethics (3)
- PHIL 2040 Philosophy as Conversation (3)
- PHIL 2640 Science in the Modern World (3)
- RELI 2210 Introduction to the Study of Religion (3)

## US History: 6 credits
- HIST 2010 US to 1877 (3)
- HIST 2020 U.S. Since 1877 (3)

## Mathematics: 3-4 credits
- MATH 1530 Prob. and Stats.- Non-Calculus (3)
  *IT and IS Students
- MATH 1910 Calculus I (4)
  *CS and CSMN Students
- MATH 1915 Calculus I (4)
  *IT and IS Students
- MATH 1910 Calculus I (4)
  *CS and CSMN Students

## Social/Behavioral Sciences: 6 credits (select two)
- ANTH 1240 Intro. to Cultural Anthropology (3)
- COBH 1010 Lifetime Behav. For Healthy Liv. (3)
- ECON 2220 Principles of Microeconomics (3)
- ECON 2220 Principles of Microeconomics (3)
- ECON 1050 Economics & Society (3)
- ECON 2210 Principles of Macroeconomics (3)
  *IS Concentration Choose ECON 2210
- GEOG 1012 Intro. to Cultural Geography (3)
- EDFN 2310 Developmental Psychology (3)
- HDAL 2340 Understanding Cultural Div. (3)
- MCOM 1030 Media Literacy (3)
- PSCI 1110 Intro. to Political Science (3)
- PSCI 1120 Intro. to American Government (3)
- PSYC 1310 Introduction to Psychology (3)
- SOCI 1020 Introduction to Sociology (3)
- SOCI 2020 Social Problems (3)
- SRVL 1020 Intro. to Service Learning (3)
- WGS 2010 Women's, Gender, & Sexual Studies (3)

## Natural Sciences: 8 credits of Natural Science excluding those for non-science majors:
- ASTR 1010 Astronomy I (4)
- ASTR 1020 Astronomy II (4)
- ASTR 1035 Life in the Universe (4)
- BIOL 1110 Biology for Science Majors I (4)
- BIOL 1111 Biology for Science Majors I Lab (0)
- BIOL 1120 Biology for Science Majors II (4)
- BIOL 1121 Biology for Science Majors II Lab (0)
- BIOL 1130 Biology for Science Majors III (4)
- BIOL 1131 Biology for Science Majors III Lab (0)
- CHEM 1110 General Chemistry I (3)
- CHEM 1111 General Chemistry I Lab (1)
- CHEM 1120 General Chemistry II (3)
- CHEM 1121 General Chemistry II Lab (1)
- GEOS 1040 Geosciences: Earth & Society (3)
- GEOS 1041 Geosciences: Earth & Society Lab (1)
- GEOS 1050 Geosciences: Earth Thru Time (3)
- GEOS 1051 Geosciences: Earth Thru Time Lab (1)
- HSCI 2010 Anatomy and Physiology I (4)
- HSCI 2011 Anatomy and Physiology I Lab (0)
- HSCI 2020 Anatomy and Physiology II (4)
- HSCI 2021 Anatomy and Physiology II Lab (0)
- PHYS 2010 Gen. Physics I-Noncalculus (3)
- PHYS 2011 Gen. Physics I Lab-Noncalculus (1)
- PHYS 2020 Gen. Physics II-Noncalculus (3)
- PHYS 2021 Gen. Physics II Lab-Noncalculus (1)
- PHYS 2110 Technical Physics I-Calculus (5)
- PHYS 2120 Technical Physics II-Calculus (5)

**These are the only sciences accepted for Computing Majors."
Computing Major and IT Concentration Courses

CSCI 1100 Using Information Technology 3 cr
CSCI 1250 Intro to Computer Science I 4 cr
CSCI 1900 Math for Computer Science 3 cr
CSCI 1510 Student in University 3 cr Freshmen
MATH 1530 Prob. & Stats. 3 cr

CSCI 1210 Essentials of Web Dev. 3 cr
CSCI 1260 Intro. to Computer Science II 4 cr
CSCI 1900 Math for Computer Science 3 cr
CSCI 1400 PC Set-Up & Maintenance 1 cr
Free Elective 1 cr

CSCI 2910 Server-Side Web Programming 4 cr
CSCI 3020 Database Advanced Topics 3 cr
CSCI 2150 Computer Organization 3 cr
CSCI 3400 Networking Fundamentals 3 cr
Free Elective 3 cr
Literature 3 cr

CSCI 3110 Adv. Topics in Web Development 3 cr
CSCI 3000 Career Readiness 3 cr
Free Elective 3 cr

CSCI 2200 Unix Fundamentals 3 cr
CSCI Appr. Major Elective 3 cr
Natural Science w/ Lab 4 cr

CSCI 3500 Info, Security & Assurance 3 cr
CSCI 4200 Intro to System Administration 3 cr
CSCI Appr. Major Elective 3 cr
Social and Behavioral Science 3 cr

CSCI 4250 Software Engineering I 3 cr
CSCI 4417 Intro to System Administration 3 cr
CSCI Appr. Major Elective 3 cr
HIST 2010 3 cr

CSCI 4350 Software Engineering II 3 cr
CSCI 4927 Human & Computer Interaction 3 cr
CSCI 3000+ Major Elective 3 cr
HIST 2020 3 cr

General Education Courses

ENGL 1010 3 cr
Oral Communication 3 cr
ENGL 1020 3 cr
Fine Arts 3 cr

Free Elective 3 cr
Natural Science w/ Lab 4 cr
Humanities 3 cr

Notes:
- Each row represents 1 semester in Computing
- Not all prerequisites are represented in this chart
- Course prerequisites are on page 10-11 in booklet
- Shaded courses are part of the Computing Core
- Semesters may vary depending on availability & student progress
### CSCI Major Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>PreReqs</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 1720</td>
<td>Intermediate Web</td>
<td>CSCI 1210</td>
</tr>
<tr>
<td>CSCI 1120</td>
<td>Advanced Spreadsheets</td>
<td>CSCI 1100</td>
</tr>
<tr>
<td>CSCI 4317</td>
<td>Internet and Computer Law</td>
<td>60 hours completed</td>
</tr>
<tr>
<td>CSCI 4957</td>
<td>Special Topics</td>
<td>Varies</td>
</tr>
<tr>
<td>CSCI 4047</td>
<td>Data Analytics &amp; Visualization</td>
<td>CSCI 2020</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 4905</td>
<td>Internship</td>
</tr>
<tr>
<td></td>
<td>Typically done after CSCI 2210 or CSCI 2910</td>
</tr>
</tbody>
</table>

**Students can find additional CSCI Major Electives from concentrations other than the one they are currently enrolled.**

### Computing Core and CSCI 1100 (All computing majors take these courses)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>PreReqs</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 1100</td>
<td>Using Information Technology</td>
<td>None</td>
</tr>
<tr>
<td>CSCI 1250</td>
<td>Intro. Computer Science I</td>
<td>LS-Math</td>
</tr>
<tr>
<td>CSCI 1260</td>
<td>Intro. Computer Science II</td>
<td>CSCI 1100 &amp; CSCI 1250 (B-or-Better)</td>
</tr>
<tr>
<td>CSCI 1400</td>
<td>PC Set-Up &amp; Maintenance</td>
<td>CSCI 1100</td>
</tr>
<tr>
<td>CSCI 1510</td>
<td>Student in University</td>
<td>1st or 2nd Semester Freshman</td>
</tr>
<tr>
<td>CSCI 1900</td>
<td>Math for Computer Science</td>
<td>MATH 1530, MATH 1720, or MATH 1910</td>
</tr>
<tr>
<td>CSCI 2020</td>
<td>Fundamentals of Database</td>
<td>None</td>
</tr>
<tr>
<td>CSCI 2150</td>
<td>Computer Organization</td>
<td>CSCI 1250 (B-or-Better) &amp; CSCI 1900</td>
</tr>
<tr>
<td>CSCI 3400</td>
<td>Networking Fundamentals</td>
<td>CSCI 1400, CSCI 1900, CSCI 1260 (B-or-Better) &amp; (MATH 1530 or MATH 2050)</td>
</tr>
<tr>
<td>CSCI 3500</td>
<td>Info. Security &amp; Assurance</td>
<td>CSCI 1260 (B-or-Better) &amp; CSCI 2020</td>
</tr>
<tr>
<td>CSCI 4250</td>
<td>Software Engineering I</td>
<td>(CSCI 2910 or CSCI 3230)</td>
</tr>
<tr>
<td>CSCI 4350</td>
<td>Software Engineering II</td>
<td>CSCI 4250</td>
</tr>
</tbody>
</table>

### Cybersecurity and Modern Networks (CSMN)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>PreReqs</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 2200</td>
<td>Unix Fundamentals</td>
<td>CSCI 1260 (B-or-Better)</td>
</tr>
<tr>
<td>CSCI 2210</td>
<td>Data Structures</td>
<td>CSCI 1900 &amp; CSCI 1260 (B-or-Better)</td>
</tr>
<tr>
<td>CSCI 3160</td>
<td>Computer Systems</td>
<td>CSCI 2150, CSCI 2200, &amp; CSCI 1260 (B-or-Better)</td>
</tr>
<tr>
<td>CSCI 3510</td>
<td>Network Security</td>
<td>CSCI 3400 &amp; CSCI 3500</td>
</tr>
<tr>
<td>CSCI 3600</td>
<td>Computer Scripting</td>
<td>CSCI 2200 &amp; CSCI 3500</td>
</tr>
<tr>
<td>CSCI 3610</td>
<td>Secure Coding</td>
<td>CSCI 2150 &amp; CSCI 2210</td>
</tr>
<tr>
<td>CSCI 4507</td>
<td>Computer Forensics</td>
<td>(CSCI 2210 or CSCI 2910)</td>
</tr>
<tr>
<td>CSCI 4537</td>
<td>Ethical Hacking</td>
<td>(CSCI 2210 or CSCI 2910)</td>
</tr>
<tr>
<td>CSCI 4607</td>
<td>Information Risk Mgmt.</td>
<td>CSCI 3510</td>
</tr>
<tr>
<td>CSCI 4637</td>
<td>Wireless &amp; Mobile Computing</td>
<td>CSCI 3160, CSCI 2200, &amp; CSCI 3500</td>
</tr>
<tr>
<td>CSCI 4657</td>
<td>Cloud Computing</td>
<td>CSCI 2210 &amp; CSCI 3500</td>
</tr>
<tr>
<td>CSCI 4677</td>
<td>Internet of Things (IoT)</td>
<td>CSCI 4637 &amp; CSCI 4657</td>
</tr>
<tr>
<td>MATH 1910</td>
<td>Calculus I</td>
<td>MATH 1720, ACT-M: 27+, or SAT-M: 630+</td>
</tr>
<tr>
<td>MATH 2050</td>
<td>Probability &amp; Statistics - Calculus Based</td>
<td>MATH 1910</td>
</tr>
<tr>
<td>CSCI 3000</td>
<td>Career Readiness</td>
<td>CSCI 2210 or CSCI 2910</td>
</tr>
</tbody>
</table>

**Note:** All PreReq Courses Require a C- or better unless otherwise notated.
# Catalog Year 2023-2024

## Course List with Prerequisites

(All PreReq Courses Require a C- or better unless otherwise notated)

## Computer Science (CS)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 2200 (3 cr)</td>
<td>Unix Fundamentals</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: CSCI 1260 (B- or Better)</td>
<td></td>
</tr>
<tr>
<td>CSCI 2210 (4 cr)</td>
<td>Data Structures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: CSCI 1900 &amp; CSCI 1260 (B- or Better)</td>
<td></td>
</tr>
<tr>
<td>CSCI 3160 (4 cr)</td>
<td>Computer Systems</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: CSCI 2150, CSCI 2200, &amp; CSCI 1260 (B- or Better)</td>
<td></td>
</tr>
<tr>
<td>CSCI 3230 (4 cr)</td>
<td>Algorithms</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: CSCI 2210 &amp; MATH 1920</td>
<td></td>
</tr>
<tr>
<td>CSCI 3000 (3 cr)</td>
<td>Career Readiness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: CSCI 2210 or CSCI 2910</td>
<td></td>
</tr>
<tr>
<td>CSCI 4727 (3 cr)</td>
<td>Operating Systems</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: CSCI 3160 &amp; CSCI 3230</td>
<td></td>
</tr>
<tr>
<td>MATH 1910 (4 cr)</td>
<td>Calculus I</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: MATH 1720, ACT-M: 27+, or SAT-M: 630+</td>
<td></td>
</tr>
<tr>
<td>MATH 1920 (4 cr)</td>
<td>Calculus II</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: MATH 1910</td>
<td></td>
</tr>
<tr>
<td>MATH 2010 (3 cr)</td>
<td>Linear Algebra</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: MATH 1840 or MATH 1910</td>
<td></td>
</tr>
<tr>
<td>MATH 2050 (3 cr)</td>
<td>Probability &amp; Statistics - Calculus Based</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: MATH 1910</td>
<td></td>
</tr>
</tbody>
</table>

## Information Systems (IS)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 1210 (3 cr)</td>
<td>Essentials of Web Dev.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: None</td>
<td></td>
</tr>
<tr>
<td>CSCI 2910 (4 cr)</td>
<td>Server-Side Web Programming</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: CSCI 1210, CSCI 2020, &amp; CSCI 1260 (B- or Better)</td>
<td></td>
</tr>
<tr>
<td>CSCI 3020 (3 cr)</td>
<td>Database Advanced Topics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: CSCI 2020</td>
<td></td>
</tr>
<tr>
<td>CSCI 3700 (3 cr)</td>
<td>Enabling Business with Information Systems</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: (MGMT 3000 or CSCI 2020) &amp; CSCI 1100</td>
<td></td>
</tr>
<tr>
<td>CSCI 4757 (3 cr)</td>
<td>IS Implementation Fall Only</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: CSCI 3700</td>
<td></td>
</tr>
<tr>
<td>CSCI 4767 (3 cr)</td>
<td>Enterprise Programming Spring Only</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: (CSCI 2210 or CSCI 2910) &amp; CSCI 3700</td>
<td></td>
</tr>
<tr>
<td>CSCI 3000 (3 cr)</td>
<td>Career Readiness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: CSCI 2210 or CSCI 2910</td>
<td></td>
</tr>
<tr>
<td>MATH 1530 (3cr)</td>
<td>Probability &amp; Statistics - Noncalculus</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: MATH 1910</td>
<td></td>
</tr>
</tbody>
</table>

**Accounting Emphasis 15 credits**
- ECON 2210 Principles of Macro. (3 cr)
- ACCT 2010 Princ. of Accounting I (3 cr)
- ACCT 2020 Princ. of Accounting II (3 cr)
- ACCT 3020 Financial Accounting (3 cr)
- ACCT 3110 Mgmt Accounting (3 cr)

**Management Emphasis 15 credits**
- ECON 2210 Principles of Macro. (3 cr)
- ACCT 2010 Princ. of Accounting I (3 cr)
- MGMT 3000 Org. Behavior & Mgmt (3 cr)
- MGMT 4020 Org. Theory & Dev. (3 cr)
- MGMT 4460 Org. Leadership (3 cr)

**Healthcare Mgmt & Analytics 15 credits**
- CSCI 3510 Network Security (3 cr)
- CSCI 4047 Data Analytics and Vis. (3 cr)
- CSCI 4537 Ethical Hacking (3 cr)
- CSCI 4607 Info. Risk Management (3 cr)
- CSCI 4847 Health Info. Systems (3 cr)

## Information Technology (IT)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 1210 (3 cr)</td>
<td>Essentials of Web Dev.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: None</td>
<td></td>
</tr>
<tr>
<td>CSCI 2200 (3 cr)</td>
<td>Unix Fundamentals</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: CSCI 1260 (B- or Better)</td>
<td></td>
</tr>
<tr>
<td>CSCI 2910 (4 cr)</td>
<td>Server-Side Web Programming</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: CSCI 1210, CSCI 2020, &amp; CSCI 1260 (B- or Better)</td>
<td></td>
</tr>
<tr>
<td>CSCI 3020 (3 cr)</td>
<td>Database Advanced Topics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: CSCI 2020</td>
<td></td>
</tr>
<tr>
<td>CSCI 3700 (3 cr)</td>
<td>Enabling Business with Information Systems</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: (MGMT 3000 or CSCI 2020) &amp; CSCI 1100</td>
<td></td>
</tr>
<tr>
<td>CSCI 3100 (3 cr)</td>
<td>Adv. Topics in Web Development</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: CSCI 2910</td>
<td></td>
</tr>
<tr>
<td>CSCI 3700 (3 cr)</td>
<td>Enabling Business with Information Systems</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: (MGMT 3000 or CSCI 2020) &amp; CSCI 1100</td>
<td></td>
</tr>
<tr>
<td>CSCI 3417 (3 cr)</td>
<td>Intro to System Admin.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: CSCI 2150, CSCI 2200, &amp; CSCI 3400</td>
<td></td>
</tr>
<tr>
<td>CSCI 3000 (3 cr)</td>
<td>Career Readiness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: CSCI 2210 or CSCI 2910</td>
<td></td>
</tr>
<tr>
<td>CSCI 4927 (3 cr)</td>
<td>Human &amp; Computer Interaction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: CSCI 4250</td>
<td></td>
</tr>
<tr>
<td>MATH 1530 (3cr)</td>
<td>Probability &amp; Statistics - Noncalculus</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PreReqs: MATH 1910</td>
<td></td>
</tr>
</tbody>
</table>
Additional Opportunities

Double Concentrating:

Students are able to declare two concentrations. The Computing Core will remain the same, but the student will be required to meet the concentration specific courses for each of their chosen concentrations. Any courses that overlap in the concentrations will count for both. Additionally, the extra courses related to each specific concentration can be used as the major electives for the other concentration being pursued. If wanting to double concentrate with CSMN, the student must be admitted into the CSMN concentration (see page 4).

Choosing to pursue two concentrations will typically postpone graduation by one or more semesters.

Your diploma will read Bachelor of Science in Computing, but your transcript will list both concentrations.

Accelerated Bachelors to Masters Degree Program:

Purpose: The accelerated bachelors to masters degree program provides high performing ETSU undergraduate students an opportunity to complete both the bachelor and master degrees at an accelerated pace. Participating students can apply as many as 12 credit hours of graduate-level coursework toward both of their degrees.

Benefit: Participating students will benefit by accelerated completion of two degrees, reducing time and cost. Programs will benefit by recruiting motivated students who desire such an opportunity. Particularly motivated students with a number of dual-enrollment or advanced placement courses could additionally reduce the time and cost of earning both degrees.

Eligibility: ETSU students may apply to the program once they have completed 75 credits in their undergraduate programs, including credits earned from dual enrollment or advanced placement. They must apply and be accepted to the accelerated program (including acceptance into the graduate program) prior to earning the undergraduate degree. Transfer students must have completed at least one year (2 semesters) at ETSU prior to requesting admission to the accelerated program.

Minimum GPA: Students must have a minimum ETSU undergraduate GPA of 3.25 to request admission to the program. Individual programs may impose higher GPA requirements.

Admissions: Admission to the accelerated program is contingent on meeting requirements of the respective programs and the School of Graduate Studies (SGS). Permission to pursue developing a proposal for the accelerated program will not guarantee admission to the graduate program.
Additional Opportunities

Internships (CSCI 4905):

An internship is a great opportunity to gain valuable, real-world experience in your field of study. This experience can differentiate you from your competition when applying for full-time employment. In some cases, internships can even turn into full-time employment. The summer before your senior year is an ideal time for an internship. You should utilize the College of Business and Technology Career Services office to make an internship part of your academic experience. Internships can also be used as one of your Approved CSCI Electives in your program. For information, please visit: https://www.etsu.edu/cbat/careerservices/internships/students.php.

Here are some places previous students have interned at:

Amazon  ElectroMotor  Pointech
Avero Advisors  EPI-USE Labs  PSAV
BAE Systems  ETSU  PX8 Solutions
Ballad Health  ETSU Research Corp  Q2
Bell Flight  Farmers State Bank  Randstad Sourcercraft
Bright Ridge  FBI  Revature
BSI Financial Services  Federal Reserve Bank of Atlanta  Riparian LLC
Building Information  Food City  RJP Systems LLC
Business Info Systems (BIS)  Forward Air Corporation  Rogers Group Inc
BWXT  GPM Investments, LLC  Ryman Hospitality Properties
CGI/CGI Federal  Guidance Residential  Securities Service Network
CJT Software  HPA, A Cognizant Company  Siemens
Clayton Homes  Hungate Engineering  Smarty Pants
Commonwealth Computer Research  Immersed Scuba  Star Construction
Comprehensive Com. Based Services  InfoSystems, Inc  Strongwell
Crown Laboratories  IT Consulting  Tele-Optics
Cruze Computer System  Kroger  Tennessee Valley Authority
DENSO  Lockheed Martin  The AAM Group
Drake Software  NFS  TTP Solutions
Eastman Credit Union  NN, Inc  U.S. Department of Justice
Eastman Chemical Company  Noveta  UTC-Research
Eastman - Capital Intelligence and Process  Nuclear Fuel Services  VISA
Eastman - CSS  Oak Ridge National Laboratory  Vollara
Eastman - Trade and Regulatory  OnePartner  Wells Fargo
Eastman - Global IT Security  ORAU  X, The Moonshot Factory
Eastman - SQL Database Team  ORNL  Y-12 National Security Complex
EFC Systems  OSisoft