Advisement Booklet
2020 – 2021

Department of Computing Undergraduate Advisement

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**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/facstaff/.**
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. Student Education Plan in Degree Works provides 4 different views:
  - **Calendar view** - compact view of the 4-year plan
  - **Audit view** - side by side view of your audit & 4-year plan
  - **Edit view** - changes to the plan are made in this view
  - **Note view** - Allows you to print notes attached to a class
- **Find your Advisor in Degree Works using the "Advisor Contact List."** This is a hyperlink to all advisors' information.
- 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 and IE 9
- **You will not be cleared for graduation until completion of everything in your Degree Works.**

**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, computer architecture, and operating systems. 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 in 2024.
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.

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 ENGL 1010 and ENGL 1020 with a minimum grade of “C”
- Complete CSCI 1100 or the UIT Proficiency Exam
- Complete 124 credit hours Including:
  - ETSU General Education Requirements
  - Major Requirements
  - Any Additional Electives
- Complete the California Critical Thinking Skills Test (CCTST)
- Complete the Major Field Test (if applicable)

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
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 Requirements:**

1. Students must receive a grade of B or better in the courses to be applied toward both the bachelor and master degrees.
2. No more than twelve (12) credits of graduate work may be counted towards the requirements of both degrees.
3. If a student’s cumulative undergraduate and graduate GPA falls below the required program minimum, then he/she will need program and graduate school approval to continue in the accelerated program. Program approval of continuation must be written and copied to the student’s undergraduate and graduate files.
4. A student who withdraws or is administratively withdrawn from the accelerated program may not subsequently count courses for both degrees; the student may count eligible courses toward one degree only.
### 2020 – 2021 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 2055 Argumentation & Debate (3)

**Literature:** 3 credits (select one)
- ENGL 2030 Literary Heritage (3)
- ENGL 2110 American Literature II (3)
- ENGL 2120 American Literature II (3)
- ENGL 2210 British Literature I (3)
- ENGL 2220 British Literature II (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 2010 Art History Survey II (3)
- BLUE 2150 American Roots Music (3)
- DANC 1500 Dance as Human Experience (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 Hist. & Civ. to 1500 (3)
- HIST 1120 World Hist. & Civ. since 1500 (3)
- PHIL 1030 Introduction to Philosophy (3)
- PHIL 2020 Introduction to Ethics (3)
- PHIL 2040 Philosophy as Conversation (3)
- RELI 2210 Intro. to the Study of Religion (3)
- PHIL 2640 Science in the Modern World (3)

**History:** 6 credits (select two)
- HIST 2010 US to 1877 (3)
- HIST 2020 U.S. Since 1877 (3)
- HIST 2030 History of Tennessee (3)

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

*CS and CSMN Students

**Social/Behavioral Sciences:** 6 credits (select two)
- ANTH 1240 Intro. to Cultural Anthropology (3)
- ECON 2220 Principles of Microeconomics (3)
- ECON 1050 Economics & Society (3) OR ECON 2210 Principles of Macroeconomics (3)
- *IS Concentration Choose ECON 2210
- GEOG 1010 Intro. to Cultural Geography (3)
- HDAL 2310 Developmental Psychology (3)
- HDAL 2340 Understanding Cultural Div. (3)
- MCOM 1030 Intro. to Mass Communications (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)
- WMST 2010 Intro. to Women's 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)
- CHEM 1110 General Chemistry I (4)
- CHEM 1111 General Chemistry I Lab (0)
- CHEM 1120 General Chemistry II (4)
- CHEM 1121 General Chemistry II Lab (0)
- 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 that count for Computing.
Catalog Year 2020-2021
Cybersecurity and Modern Networks (CSMN)
Suggested Course Sequence

Computing Major and CSMN Concentration Courses

Math 1910 Calculus I 4 cr
MATH 2050 Prob. & Stats. Calc. Based 3 cr
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 1st semester

CSCI 2020 Fundamentals of Database 3 cr
CSCI 2120 Data Structures 4 cr
CSCI 1260 Intro. to Computer Science II 4 cr
CSCI 2150 Computer Organization 3 cr
CSCI 1400 PC Set-Up & Maintenance 1 cr

CSCI 2200 Unix Fundamentals 3 cr
CSCI 2160 Assembly Language 4 cr
CSCI 3400 Networking Fundamentals 3 cr
CSCI 3500 Info. Security & Assurance 3 cr
ENGL 1010 3 cr
COMM 2055 3 cr
ENGL 1020 3 cr
Fine Arts 3 cr
Literature Gen Ed. 3 cr
Humanities 3 cr

CSCI 3410 Enterprise Info. Security 3 cr
CSCI 3610 Secure Coding 3 cr
CSCI 4007 Information Risk Management 3 cr
CSCI 4507 Computer Forensics 3 cr

CSCI 4607 Cloud Computing 3 cr
CSCI 4637 Wireless & Mobile Computing 3 cr
CSCI 4677 Internet of Things (IoT) 3 cr
CSCI 4537 Ethical Hacking 3 cr

CSCI 4250 Software Engineering I 3 cr
CSCI 4350 Software Engineering II 3 cr
HIST 2010 3 cr
HIST 2020 3 cr

Notes:
- Each row represents 1 semester in Computing
- Not all prerequisites are represented in this chart
- Course prerequisites are on page 8 in booklet
- Shaded courses are part of the Computing Core
- Semesters may vary depending on availability & student progress
# Computing Major and CS Concentration Courses

**Interest in Applying for CSMN**

<table>
<thead>
<tr>
<th>Math 1910 Calculus I</th>
<th>4 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2050 Prob. &amp; Stats. Calc. Based</td>
<td>3 cr</td>
</tr>
<tr>
<td>CSCI 1100 Using Information Technology</td>
<td>3 cr</td>
</tr>
<tr>
<td>CSCI 1250 Intro to Computer Science I</td>
<td>4 cr</td>
</tr>
<tr>
<td>CSCI 1510 Student in University</td>
<td>3 cr</td>
</tr>
<tr>
<td>1st semester</td>
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</tr>
<tr>
<td>CSCI 1900 Math for Computer Science</td>
<td>3 cr</td>
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<tr>
<td>CSCI 2020 Fundamentals of Database</td>
<td>3 cr</td>
</tr>
<tr>
<td>CSCI 2210 Data Structures</td>
<td>4 cr</td>
</tr>
<tr>
<td>MATH 1920 Calculus II</td>
<td>4 cr</td>
</tr>
<tr>
<td>CSCI 2200 Unix Fundamentals</td>
<td>3 cr</td>
</tr>
<tr>
<td>CSCI 2150 Computer Organization</td>
<td>3 cr</td>
</tr>
<tr>
<td>CSCI 3230 Algorithms</td>
<td>4 cr</td>
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<tr>
<td>CSCI 4250 Operating Systems</td>
<td>3 cr</td>
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<tr>
<td>CSCI 4727 Assembly Language</td>
<td>4 cr</td>
</tr>
<tr>
<td>CSCI 2160 Networking Fundamentals</td>
<td>3 cr</td>
</tr>
<tr>
<td>CSCI 4717 Computer Architecture</td>
<td>3 cr</td>
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<tr>
<td>CSCI 3400 Info. Security &amp; Assurance</td>
<td>3 cr</td>
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<tr>
<td>CSCI 3500 Linear Algebra</td>
<td>3 cr</td>
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<td>CSCI 3900 Free Elective</td>
<td>3 cr</td>
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<td>CSCI 3900 CSCI Appr. Major Elective</td>
<td>3 cr</td>
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<td>CSCI 3900 CSCI Appr. Major Elective</td>
<td>3 cr</td>
</tr>
<tr>
<td>CSCI 3900 Natural Science w/ Lab</td>
<td>4 cr</td>
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<tr>
<td>CSCI 4900 CSCI Appr. Major Elective</td>
<td>3 cr</td>
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<tr>
<td>CSCI 4900 CSCI Appr. Major Elective</td>
<td>3 cr</td>
</tr>
<tr>
<td>CSCI 4900 Natural Science w/ Lab</td>
<td>4 cr</td>
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<tr>
<td>CSCI 4900 MATH 2010 Linear Algebra</td>
<td>3 cr</td>
</tr>
<tr>
<td>CSCI 4900 HIST 2010</td>
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<td>CSCI 4900 HIST 2020</td>
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<tr>
<td>CSCI 4900 Social and Behavioral Science Gen Ed</td>
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</tr>
<tr>
<td>CSCI 4900 Social and Behavioral Science Gen Ed</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

**General Education Courses**

| ENGL 1010 | 3 cr |
| ENGL 1020 | 3 cr |
| COMP 2055 | 3 cr |
| Fine Arts | 3 cr |
| Literature Gen Ed. | 3 cr |
| Humanities | 3 cr |

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Catalog Year 2020-2021
Computer Science (CS)
Suggested Course Sequence

Computing Major and CS Concentration Courses

- CSCI 1100 Using Information Technology 3 cr
- Math 1910 Calculus I 4 cr
- MATH 1920 Calculus II 4 cr
- MATH 2010 Linear Algebra 3 cr
- CSCI 2210 Data Structures 4 cr
- CSCI 2200 Unix Fundamentals 3 cr
- CSCI 2160 Assembly Language 4 cr
- CSCI 4727 Operating Systems 3 cr
- CSCI 4350 Software Engineering II 3 cr
- CSCI 1250 Intro to Computer Science I 4 cr
- CSCI 1900 Math for Computer Science 3 cr
- CSCI 2150 Computer Organization 3 cr
- CSCI 1400 PC Set-Up & Maintenance 1 cr
- CSCI 2200 Unix Fundamentals 3 cr
- CSCI 2160 Assembly Language 4 cr
- CSCI 3400 Networking Fundamentals 3 cr
- CSCI 3400 Networking Fundamentals 3 cr
- CSCI 3500 Info. Security & Assurance 3 cr
- CSCI Appr. Major Elective 3 cr
- CSCI 3000+ Major Elective 3 cr
- CSCI Appr. Major Elective 3 cr
- CSCI 3000+ Major Elective 3 cr
- CSCI 3000+ Major Elective 3 cr
- CSCI Appr. Major Elective 3 cr
- HIST 2010 3 cr
- HIST 2020 3 cr
- Social and Behavioral Science Gen Ed 3 cr
- Social and Behavioral Science Gen Ed 3 cr
- Social and Behavioral Science Gen Ed 3 cr

General Education Courses 124 Hrs

- ENGL 1010 3 cr
- ENGL 1020 3 cr
- MATH 2050 Prob. & Stats. Calc. Based 3 cr
- Literature Gen Ed. 3 cr
- COMM 2055 3 cr
- Fine Arts 3 cr
- Humanities 3 cr
- Natural Science w/ Lab 4 cr
- Social and Behavioral Science Gen Ed 3 cr

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- Semesters may vary depending on availability & student progress
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 2 cr 1st semester
- MATH 1530 Prob. & Stats. 3cr
- CSCI 1210 Essentials of Web Dev. 3 cr
- CSCI 1260 Intro. to Computer Science II 4 cr
- CSCI 2020 Fundamentals of Database 3 cr
- ENGL 1010 3 cr
- ENGL 1020 3 cr
- CSCI 2150 Computer Organization 3 cr
- CSCI 1400 PC Set-Up & Maintenance 1 cr
- CSCI 3700 Enabling Bus. with IS 3 cr
- Free Elective 1 cr
- COMM 2055 3 cr
- Literature Gen Ed. 3 cr
- CSCI 2910 Server-Side Web Programming 4 cr
- CSCI 3400 Networking Fundamentals 3 cr
- Free Elective 3 cr
- Fine Arts 3 cr
- Humanities 3 cr
- CSCI 3110 Adv. Topics in Web Development 3 cr
- CSCI 3500 Info. Security & Assurance 3 cr
- Free Elective 3 cr
- CSCI Appr. Unix Fundamentals 3 cr
- Natural Science w/ Lab 4 cr
- CSCI 2200 Networking Fundamentals 3 cr
- Free Elective 3 cr
- CSCI Appr. Major Elective 3 cr
- Natural Science w/ Lab 4 cr
- CSCI 3020 Database Advanced Topics 3 cr
- CSCI 4800 Career Readiness in Comp. IT 3 cr
- Social and Behavioral Science Gen Ed 3 cr
- CSCI 4250 Software Engineering I 3 cr
- CSCI 4417 Intro to System Administration 3 cr
- HIST 2010 3 cr
- CSCI 4350 Software Engineering II 3 cr
- CSCI Appr. Major Elective 3 cr
- Social and Behavioral Science Gen Ed 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
- ENGL 1020 3 cr
- COMM 2055 3 cr
- Literature Gen Ed. 3 cr
- Natural Science w/ Lab 4 cr
- Social and Behavioral Science Gen Ed 3 cr
- HIST 2010 3 cr
- HIST 2020 3 cr

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# CSCI Major Electives

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>PreReqs</th>
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</thead>
<tbody>
<tr>
<td>CSCI 1720</td>
<td>Intermediate Web</td>
<td>CSCI 1210</td>
</tr>
<tr>
<td>CSCI 4157</td>
<td>Interactive Graphics</td>
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</tr>
<tr>
<td>CSCI 4317</td>
<td>Internet and Computer Law</td>
<td>CSCI 2210 &amp; MATH 2010</td>
</tr>
<tr>
<td>CSCI 4957</td>
<td>Special Topics</td>
<td>Varies</td>
</tr>
<tr>
<td>CSCI 4910</td>
<td>Select Topics</td>
<td>Varies</td>
</tr>
</tbody>
</table>

**CSCI 4905 (3 cr)**

**Internship**  
(Can only be used for 1 CSCI Major Elective)

PreReqs: None

**Additional CSCI Major Electives** should be chosen from concentrations outside of the student's current concentration.

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>PreReqs</th>
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</thead>
<tbody>
<tr>
<td>CSCI 1100</td>
<td>Using Information Technology</td>
<td>None</td>
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<tr>
<td>CSCI 1250</td>
<td>Intro. Computer Science I</td>
<td>LS-Math</td>
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<tr>
<td>CSCI 1260</td>
<td>Intro. Computer Science II</td>
<td>CSCI 1100, CSCI 1900, &amp; CSCI 1250 (B- or Better)</td>
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<td>CSCI 1400</td>
<td>PC Set-Up &amp; Maintenance</td>
<td>CSCI 1100</td>
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<td>CSCI 1510</td>
<td>Student in University</td>
<td>1st or 2nd Semester Freshman</td>
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<td>CSCI 1900</td>
<td>Math for Computer Science</td>
<td>CoReq CSCI 1250</td>
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<tr>
<td>CSCI 2020</td>
<td>Fundamentals of Database</td>
<td>None</td>
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<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>
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<tr>
<td>CSCI 3500</td>
<td>Info. Security &amp; Assurance</td>
<td>CSCI 3400</td>
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<tr>
<td>CSCI 4250</td>
<td>Software Engineering I</td>
<td>CSCI 3020 or CSCI 3230</td>
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<tr>
<td>CSCI 4350</td>
<td>Software Engineering II</td>
<td>CSCI 4250</td>
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# Cybersecurity and Modern Networks (CSMN)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>PreReqs</th>
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<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 2160</td>
<td>Assembly Language</td>
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<tr>
<td>CSCI 3410</td>
<td>Enterprise Information Security</td>
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<td>CSCI 3600</td>
<td>Computer Scripting</td>
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<td>CSCI 3610</td>
<td>Secure Coding</td>
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<tr>
<td>CSCI 4507</td>
<td>Computer Forensics</td>
<td>(CSCI 2210 or CSCI 2910)</td>
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<tr>
<td>CSCI 4537</td>
<td>Ethical Hacking</td>
<td>(CSCI 2210 or CSCI 2910)</td>
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<tr>
<td>CSCI 4607</td>
<td>Information Risk Mgmt.</td>
<td>CSCI 3410</td>
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<tr>
<td>CSCI 4637</td>
<td>Wireless &amp; Mobile Computing</td>
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<tr>
<td>CSCI 4657</td>
<td>Cloud Computing</td>
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<tr>
<td>CSCI 4677</td>
<td>Internet of Things (IoT)</td>
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<tr>
<td>MATH 1910</td>
<td>Calculus I</td>
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<tr>
<td>MATH 2050</td>
<td>Probability &amp; Statistics - Calculus Based</td>
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PreReqs: CSCI 2210 & CSCI 3500  
PreReqs: CSCI 2150 & (CSCI 2910 or CSCI 2210)  
PreReqs: CSCI 4637 & CSCI 4657  
PreReqs: MATH 1720, ACT-M: 27+, or SAT-M: 630+  
PreReqs: MATH 1910  
PreReqs: MATH 1910
### Computer Science (CS)

<table>
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<tbody>
<tr>
<td>CSCI 2200</td>
<td>Unix Fundamentals</td>
<td>3 cr</td>
<td>CSCI 1260 (B- or Better)</td>
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<tr>
<td>CSCI 2210</td>
<td>Data Structures</td>
<td>4 cr</td>
<td>PreReqs: CSCI 1900 &amp; CSCI 1260 (B- or Better)</td>
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<tr>
<td>CSCI 2160</td>
<td>Assembly Language</td>
<td>4 cr</td>
<td>PreReqs: CSCI 2150 &amp; CSCI 1260 (B- or Better)</td>
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<tr>
<td>CSCI 3230</td>
<td>Algorithms</td>
<td>4 cr</td>
<td>PreReqs: CSCI 2210 &amp; MATH 1920</td>
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<tr>
<td>CSCI 4717</td>
<td>Computer Architecture</td>
<td>3 cr</td>
<td>PreReqs: CSCI 2180 &amp; CSCI 3230</td>
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<tr>
<td>CSCI 4727</td>
<td>Operating Systems</td>
<td>3 cr</td>
<td>PreReqs: CSCI 2160, CSCI 2210, &amp; CSCI 2200</td>
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<tr>
<td>MATH 1910</td>
<td>Calculus I</td>
<td>4 cr</td>
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<td>MATH 1920</td>
<td>Calculus II</td>
<td>4 cr</td>
<td>PreReqs: MATH 1910</td>
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<tr>
<td>MATH 2010</td>
<td>Linear Algebra</td>
<td>3 cr</td>
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<td>Probability &amp; Statistics - Calculus Based</td>
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### Information Systems (IS)

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<tr>
<td>CSCI 1210</td>
<td>Essentials of Web Dev.</td>
<td>3 cr</td>
<td>None</td>
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<tr>
<td>CSCI 2910</td>
<td>Server-Side Web Programming</td>
<td>4 cr</td>
<td>PreReqs: CSCI 1210, CSCI 2020, &amp; CSCI 1260 (B- or Better)</td>
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<tr>
<td>CSCI 3020</td>
<td>Database Advanced Topics</td>
<td>3 cr</td>
<td>PreReqs: (CSCI 2910 or CSCI 2210) &amp; CSCI 2020</td>
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<tr>
<td>CSCI 3700</td>
<td>Enabling Business with Information Systems</td>
<td>3 cr</td>
<td>PreReqs: (MGMT 3000 or CSCI 2020) &amp; CSCI 1100</td>
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<tr>
<td>CSCI 4767</td>
<td>Enterprise Programming</td>
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<td>PreReqs: (CSCI 2210 or CSCI 2910) &amp; CSCI 3720</td>
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<td>CSCI 4770</td>
<td>Career Readiness in Computer IS</td>
<td>3 cr</td>
<td>PreReqs: CSCI 2210 or CSCI 2910</td>
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<tr>
<td>MATH 1530</td>
<td>Probability &amp; Statistics - Noncalculus</td>
<td>3 cr</td>
<td>PreReqs: MATH 1840 or MATH 1910</td>
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<tr>
<td>ECON 2070</td>
<td>Quant, Methods for Bus. Meth.</td>
<td>3 cr</td>
<td>PreReqs: MATH 1910 (4 cr)</td>
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<tr>
<td>ECON 3757</td>
<td>IS Implementation Fall Only</td>
<td>3 cr</td>
<td>PreReqs: CSCI 3720</td>
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### Accounting Emphasis 15 credits

- ECON 2210 Principles of Macroeconomics (3 cr)
- ACCT 2010 Principles of Accounting I (3 cr)
- ACCT 2020 Principles of Accounting II (3 cr)
- ACCT 3020 Financial Accounting (3 cr)
- ACCT 3110 Management Accounting (3 cr)

### Management Emphasis 15 credits

- ECON 2210 Principles of Macroeconomics (3 cr)
- ACCT 2010 Principles of Accounting I (3 cr)
- MGMT 3000 Organizational Behavior & Management (3 cr)
- MGMT 4020 Organizational Theory & Development (3 cr)
- MGMT 4030 Current Management Issues (3 cr)

### Information Technology (IT)

<table>
<thead>
<tr>
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<th>Credits</th>
<th>PreReqs</th>
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</thead>
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<tr>
<td>CSCI 1210</td>
<td>Essentials of Web Dev.</td>
<td>3 cr</td>
<td>None</td>
</tr>
<tr>
<td>CSCI 2200</td>
<td>Unix Fundamentals</td>
<td>3 cr</td>
<td>PreReqs: CSCI 1260 (B- or Better)</td>
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<tr>
<td>CSCI 2910</td>
<td>Server-Side Web Programming</td>
<td>4 cr</td>
<td>PreReqs: CSCI 1210, CSCI 2020, &amp; CSCI 1260 (B- or Better)</td>
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<tr>
<td>CSCI 3020</td>
<td>Database Advanced Topics</td>
<td>3 cr</td>
<td>PreReqs: (CSCI 2910 or CSCI 2210) &amp; CSCI 2020</td>
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<tr>
<td>CSCI 3110</td>
<td>Adv. Topics in Web Development</td>
<td>3 cr</td>
<td>PreReqs: CSCI 2910</td>
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<tr>
<td>CSCI 3700</td>
<td>Enabling Business with Information Systems</td>
<td>3 cr</td>
<td>PreReqs: (MGMT 3000 or CSCI 2020) &amp; CSCI 1100</td>
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<tr>
<td>CSCI 4417</td>
<td>Intro to System Admin.</td>
<td>3 cr</td>
<td>PreReqs: CSCI 2150, CSCI 2200, &amp; CSCI 3400</td>
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<td>CSCI 4800</td>
<td>Career Readiness in Computer IT</td>
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<td>CSCI 4927</td>
<td>Human &amp; Computer Interaction</td>
<td>3 cr</td>
<td>PreReqs: CSCI 4250</td>
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<tr>
<td>MATH 1530</td>
<td>Probability &amp; Statistics - Noncalculus</td>
<td>3 cr</td>
<td>PreReqs: MATH 1840 or MATH 1910</td>
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