You will need to complete the requirements in this booklet in order to graduate with a degree in Computing from ETSU.

*******SAVE THIS BOOKLET*******

Bring this booklet to each advising session to prepare for the next semester. If you have questions, please ask your advisor.

ADVISEMENT IS REQUIRED FOR ALL COMPUTING MAJORS from the time they enter the major until graduation. Computing majors must meet with their assigned advisor prior to registering each semester. Only then will the advisor remove the “registration hold” so that the student may register.
Department of Computing
Chairperson
Dr. Tony Pittarese
Office: 465 Nicks Hall
Phone: (423) 439-8416
E-mail: pittares@etsu.edu

Department of Computing
Assistant Chairperson &
Graduate Coordinator
Dr. Marty Barrett
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Executive Aide
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Department of Computing
Undergraduate Advisement
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E-mail: houstonjl@etsu.edu

For a full listing of Faculty and Staff, please visit www.etsu.edu/computing

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).
Bachelor of Science in Computing with concentrations in

- Computer Science (CS)
- Information Systems (IS)
- Information Technology (IT)

The three 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 one in discrete mathematics. Concentrations emphasize practical skills needed to succeed in 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 and nation at highly competitive salaries. Many graduates also complete advance degrees, including the department’s graduate program.

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 programs, 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.
# Computing Concentration Comparison Chart

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Computer Science (CS)</th>
<th>Information Systems (IS)</th>
<th>Information Technology (IT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gen Ed Requirements (All Computing Majors must take Probability and Statistics and pass with a C- or better)</td>
<td>41 Credit Hours</td>
<td>38 credit hours + 3 credit hours from ECON 2210 in Emphasis Area</td>
<td>41 Credit Hours</td>
</tr>
<tr>
<td>Computing Core</td>
<td>33 Credit Hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concentration Courses</td>
<td>36 Credit Hours</td>
<td>25-26 Credit Hours *</td>
<td>28 Credit Hours</td>
</tr>
<tr>
<td>Major Electives (At least one major elective in each concentration must be at the 3000/4000 level.)</td>
<td>9 Credit Hours</td>
<td>9 Credit Hours</td>
<td>9 Credit Hours</td>
</tr>
<tr>
<td>Emphasis Area</td>
<td>0 Credit Hours</td>
<td>15 Credit Hours 3hrs. are also used in the General Education Req.</td>
<td>0 Credit Hours</td>
</tr>
<tr>
<td>Free Electives (Any course that does not count towards General Education Requirements, Computing Core, Concentration Courses, or Emphasis Area.)</td>
<td>5 Credit Hours</td>
<td>3-4 Credit Hours *</td>
<td>13 Credit Hours</td>
</tr>
<tr>
<td>Minor Requirements</td>
<td>No Minor Required</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>124 Credit Hours</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Special Notes
- Included in the Concentration Courses
  - Calculus I
  - Calculus II
  - Linear Algebra
  - Additional Lab Science
- Take ECON 2210 to satisfy a general education course (Social/Behavioral Science) and an emphasis area required course
- * Calculus I (4) or Differential Algebra (3)

## Important Notes
- Credit hours for CSCI 1100 are not required, since students may test out of CSCI 1100 during their first semester. If a student takes CSCI 1100 for credit, the credit hours will count towards the needed free electives.
- CSCI 1510 is required for each concentration, but is not taken by students who have come into the program with a significant number of credit hours. If the advisor and student decide that the student should not take CSCI 1510, then the student must replace these 3 credit hours with another approved major elective course.
- CSCI 1510 may be attempted only once. If a student fails CSCI 1510, then the student must take another approved major elective to replace those 3 credit hours.
- All major electives are APPROVED major electives, meaning the electives must be discussed and approved by the student's advisor.
- CSCI 1100, Internship/Cooperative education courses and similar courses will not count towards the major.
- Any course taken at another institution and transferred into ETSU must be evaluated and does not automatically count as a major requirement. Acceptance of transfer coursework is subject to articulation agreements and the decision of the Department Advisor or Chair.
- RODP courses may not be counted towards a computing concentration.
### 2017 – 2018 Gen. Ed. Requirements for Computing Majors (41 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 (select one)**
- SPCH 1300 General Speech (3)
- SPCH 2300 Public Speaking (3)
- SPCH 2320 Argumentation & Debate (3)

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

**Social/Behavioral Sciences 6 credits (select two)**
- ANTH 1240 Intro. to Cultural Anthropology (3)
- ECON 2220 Principles of Microeconomics (3)
- OR ECON 1050 Econ & Soc. (3)
- OR ECON 2210 Macroeconomics (3)

*Choose ECON 2210 if IS. concentration*

**Literature 3 credits (select one)**
- ENGL 2030 Literary Heritage (3)
- ENGL 2110 American Literature I (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)**
- ARTH 2010 Art History Survey I (3)
- ARTH 2020 Art History Survey II (3)
- BLUE 2150 American Roots Music (3)
- DANC 1500 Dance as Human Experience (3)
- HUMT 2310 Humanities I (to 1600) (3)
- HUMT 2320 Humanities II (1600 - ) (3)
- MUSC 1030 Introduction to Music (3)
- MUSC 1035 History of Jazz (3)
- THEA 1030 Introduction to Theater (3)

**Natural Sciences: 8 credits (you must select a full sequence from the following options.)**
- ASTR 1010 & ASTR 1020 Astronomy I and II
- BIOL 1110/1111 & 1120/1121 BIO I & II
- CHEM 1110/1111 & 1120/1121 Chem. I & II
- GEOL 1040/1041 & 1050/1051 Earth & Soci. & Time
- PHYS 2110 & 2120 Tech. Physics I & II Calc. Based

**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 and the Modern World (3)

These are the only sciences that count for Computing Majors. Sciences not for majors DO NOT COUNT.


# Catalog Year 2017-2018

## Computer Science (CS) Concentration Checklist

### Written Composition (6 hours)
- [ ] ENGL 1010 Critical Reading & Exp. Writing (3)
- [ ] ENGL 1020 Critical Thinking & Argumentation (3)

### Oral Communication (3 hours)
- [ ] SPCH __________________________

### Literature (3 hours)
- [ ] ENGL __________________________

### Social and Behavioral Science (6 hours)
- [ ] __________________________
- [ ] __________________________

### Using Information Technology (0 or 3 hours)
- [ ] CSCI 1100 (3) OR [ ] Proficiency Exam (0)

### Computing Core (33 Hours)
- [ ] CSCI 1250 Intro. to Computer Science I (4)
- [ ] CSCI 1260 Intro. to Computer Science II (4) *(You must pass CSCI 1250 and 1260 with a B- or better)*
- [ ] CSCI 1400 PC Set-Up and Maintenance (1)
- [ ] CSCI 1510 Student in University (3) *(If you do not pass CSCI 1510, you must take another approved major elective in its place)*
- [ ] CSCI 1900 Math for Computer Science (3)
- [ ] CSCI 2020 Fundamentals of Database (3)
- [ ] CSCI 2150 Computer Organization (3)
- [ ] CSCI 3250 Software Engineering I (3)
- [ ] CSCI 3350 Software Engineering II (3)
- [ ] CSCI 3400 Networking Fundamentals (3)
- [ ] CSCI 3500 Information Security and Assurance (3)

### History (6 hours)
- [ ] HIST __________________________
- [ ] HIST __________________________

### Fine Arts (3 hours)
- [ ] __________________________

### Humanities (3 hours)
- [ ] __________________________

### Natural Science (8 hours of a sequence)
- [ ] __________________________
- [ ] __________________________

### Probability and Statistics (3 hours)
- [ ] MATH 1530 Probability and Statistics (3)

### CS Concentration Courses (36 Hours)
- [ ] CSCI 2160 Assembly Language (4)
- [ ] CSCI 2200 Unix Fundamentals (3)
- [ ] CSCI 2210 Data Structures (4)
- [ ] CSCI 3230 Algorithms (4)
- [ ] CSCI 4717 Computer Architecture (3)
- [ ] CSCI 4727 Operating Systems (3)
- [ ] MATH 1910 Calculus I (4)
- [ ] MATH 1920 Calculus II (4)
- [ ] MATH 2010 Linear Algebra (3)
- [ ] Additional Lab Science __________________________(4)

### Major Electives (9 hours)
- [ ] APPROVED major Elective CSCI _________(3)*
- [ ] APPROVED major Elective CSCI _________(3)*
- [ ] APPROVED major Elective CSCI _________(3)*

* (At least one major elective must be at the 3XXX/4XXX level. CSCI 110X, 1200 or Co-op Ed. and Internships DO NOT count towards Major Electives)

### Free Electives (0 hours) (2 hours if CSCI 1100 is not taken)
- [ ] __________________________(____)
Catalog Year 2017-2018

Computer Science (CS) Prerequisite Courses Tree (prerequisites can change)

CSCI 1250 (4 cr) Introduction to Computer Science I (Must have a B- or better to proceed)

MATH 1910 (4 cr) Calculus I

MATH 1920 (4 cr) Calculus II

CSCI 3230 (4 cr) Algorithms

CSCI 3250 (3 cr) Software Engineering I

CSCI 3350 (3 cr) Software Engineering II

CSCI 2020 (3 cr) Fundamentals of Computer Science II (Must have a B- or better to proceed)

CSCI 2210 (4 cr) Data Structures

CSCI 2220 (3 cr) Unix Fundamentals

CSCI 4727 (3 cr) Operating Systems (Spring Only)

CSCI 4717 (3 cr) Computer Architecture (Fall Only)

CSCI 2200 (3 cr) Introduction to Computer Science II

CSCI 2160 (4 cr) Assembly Language

CSCI 3400 (3 cr) Networking Fundamentals

CSCI 3500 (3 cr) Information Security and Assurance

CSCI 1260 (4 cr) Math for Computer Science

CSCI 2000 (3 cr) Fundamentals of Database

CSCI 2150 (3 cr) Computer Organization

CSCI 1400 (1 cr) PC Set-Up and Maintenance

CSCI 3500 (3 cr) Information Security and Assurance

CSCI 1100 (3 cr) Using Information Technology

CSCI 1510 or ETSU1020 (3 cr) Freshman Experience Course

CSCI 3000+ Major Elective

CSCI 3000+ Major Elective

CSCI 3000+ Major Elective

CSCI 3000+ Major Elective

Other Requirements

MATH 2010 (3 cr) Linear Algebra

Additional Lab Science
# Information Systems (IS) Concentration Checklist

## Written Composition (6 hours)
- [ ] ENGL 1010 Critical Reading & Exp. Writing (3)
- [ ] ENGL 1020 Critical Thinking & Argumentation (3)

## Oral Communication (3 hours)
- [ ] SPCH

## Literature (3 hours)
- [ ] ENGL

## Social and Behavioral Science (6 hours)
- [ ] ECON 2210 is Required by the Emphasis

## Using Information Technology (0 or 3 hours)
- [ ] CSCI 1100 (3) **OR** [ ] Proficiency Exam (0)

## Computing Core (33 hours)
- [ ] CSCI 1250 Intro. to Computer Science I (4)
- [ ] CSCI 1260 Intro. to Computer Science II (4) *(You must pass CSCI 1250 and 1260 with a B- or better)*
- [ ] CSCI 1400 PC Set-Up and Maintenance (1)
- [ ] CSCI 1510 Student in University (3) *(If you do not pass CSCI 1510, you must take another approved major elective in its place)*
- [ ] CSCI 1900 Math for Computer Science (3)
- [ ] CSCI 2020 Fundamentals of Database (3)
- [ ] CSCI 2150 Computer Organization (3)
- [ ] CSCI 3250 Software Engineering I (3)
- [ ] CSCI 3350 Software Engineering II (3)
- [ ] CSCI 3400 Networking Fundamentals (3)
- [ ] CSCI 3500 Information Security and Assurance (3)

## Probability and Statistics (3 hours)
- [ ] MATH 1530 Probability and Statistics (3)
- [ ] CSCI 1100 (3) **OR** [ ] Proficiency Exam (0)

## IS Concentration Courses (25 - 26 hours)
- [ ] CSCI 1710 Web Design and Development (3)
- [ ] CSCI 2910 Server-Side Web Programming (4)
- [ ] CSCI 3720 Fund. of Business Info. Systems (3)
- [ ] CSCI 3020 Database Advanced Topics (3)
- [ ] CSCI 4757 Info. System Implementation (3)
- [ ] CSCI 4767 Enterprise Programming (3)
- [ ] CSCI 4770 Info. Systems Strategy and Mgmt. (3)
- [ ] MATH 1840 (3) or MATH 1910 (4)

## Major Electives (9 hours)
- [ ] APPROVED major Elective CSCI_________ (3)**
- [ ] APPROVED major Elective CSCI_________ (3)**
- [ ] APPROVED major Elective CSCI_________ (3)**

## Accountancy or Management Emphasis (15 hours **CHOOSE ONE TRACK**)

### Accountancy Track
- [ ] ECON 2210 Principles of Macroeconomics (3)
- [ ] ACCT 2010 Principles of Accounting I (3)
- [ ] ACCT 2020 Principles of Accounting II (3)
- [ ] ACCT 3010 Financial Accounting I (3)
- [ ] ACCT 3110 Management Accounting (3)

### Management Track
- [ ] ECON 2210 Principles of Macroeconomics (3)
- [ ] ACCT 2010 Principles of Accounting I (3)
- [ ] MGMT 3000 Organization Behavior Mgmt. (3)
- [ ] MGMT 4020 Organizational Theory and Dev. (3)
- [ ] MGMT 4030 Current Management Issues (3)

## Free Electives (0 - 1 hours) (2-3 hours if CSCI 1100 is not taken)
- [ ] ___________________________(__)

---

**At least one major elective must be at the 3XXX/4XXX level. CSCI 110X, 1200 or Co-op Ed. and Internships DO NOT count towards Major Electives**
Catalog Year 2017-2018
Information Systems (IS) Prerequisite Courses Tree (prerequisites can change)

CSCI 1250 (4 cr)
Introduction to Computer Science I
(Must have a B- or better to proceed)

CSCI 1900 (3 cr)
Math for Computer Science

CSCI 1100 (3 cr)
Using Information Technology

Freshman Experience Course
CSCI1510 or ETSU1020
(3 cr)

CSCI 1710 (3 cr)
Web Design and Development

CSCI 2200 (3 cr)
Fundamentals of Database

CSCI 1260 (4 cr)
Introduction to Computer Science II
(Must have a B- or better to proceed)

CSCI 2150 (3 cr)
Computer Organization

CSCI 1400 (1 cr)
PC Set-Up and Maintenance

CSCI 2910 (4 cr)
Server-Side Web Programming

CSCI 3020 (3 cr)
Database Advanced Topics

CSCI 3720 (3 cr)
Fundamentals of Business IS

ACCT 2010 (3 cr)
Principles of Accounting I

CSCI 3400 (3 cr)
Networking Fundamentals

CSCI 3500 (3 cr)
Information Security and Assurance

CSCI 3000+ Major Elective

CSCI 3250 (3 cr)
Software Engineering I

CSCI 4770 (3 cr)
Information Systems Strategy and Management
(within 2 semesters of graduating)

CSCI 4767 (3 cr)
Enterprise Programming (Spring Only)

CSCI Major Elective

CSCI 4757 IS Implementation (Fall Only)

CSCI 3350 (3 cr)
Software Engineering II

CSCI 4770 (3 cr)
Information Systems Strategy and Management
(within 2 semesters of graduating)

CSCI Major Elective

Other Requirements

ECON 2210 (3 cr)
Principles of Macroeconomics

Course in Chosen Emphasis

Course in Chosen Emphasis

Course in Chosen Emphasis

MATH 1910 (4 cr)
Calculus I

MAT H 1910 (4 cr)
Calculus I
<table>
<thead>
<tr>
<th>Written Composition (6 hours)</th>
<th>History (6 hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ ENGL 1010 Critical Reading &amp; Exp. Writing (3)</td>
<td>☐ HIST ____________________________________________</td>
</tr>
<tr>
<td>☐ ENGL 1020 Critical Thinking &amp; Argumentation (3)</td>
<td>☐ HIST ____________________________________________</td>
</tr>
<tr>
<td>Oral Communication (3 hours)</td>
<td>Fine Arts (3 hours)</td>
</tr>
<tr>
<td>☐ SPCH ________________________________________________________</td>
<td></td>
</tr>
<tr>
<td>Literature (3 hours)</td>
<td>Humanities (3 hours)</td>
</tr>
<tr>
<td>☐ ENGL _______________________________________________________</td>
<td></td>
</tr>
<tr>
<td>Social and Behavioral Science (6 hours)</td>
<td>Natural Science (8 hours of a sequence)</td>
</tr>
<tr>
<td>☐ ENGL _______________________________________________________</td>
<td></td>
</tr>
<tr>
<td>Using Information Technology (0 or 3 hours)</td>
<td>Probability and Statistics (3 hours)</td>
</tr>
<tr>
<td>☐ CSCI 1100 (3) OR ☐ Proficiency Exam (0)</td>
<td>☐ MATH 1530 Probability and Statistics (3)</td>
</tr>
<tr>
<td>Computing Core (33 Hours)</td>
<td>IT Concentration Courses (28 Hours)</td>
</tr>
<tr>
<td>☐ CSCI 1250 Intro. to Computer Science I (4)</td>
<td>☐ CSCI 1710 Web Design and Development (3)</td>
</tr>
<tr>
<td>☐ CSCI 1260 Intro. to Computer Science II (4)</td>
<td>☐ CSCI 2200 Unix Fundamentals (3)</td>
</tr>
<tr>
<td>(You must pass CSCI 1250 and 1260 with a B- or better)</td>
<td>☐ CSCI 2910 Server Side Web Programming (4)</td>
</tr>
<tr>
<td>☐ CSCI 1400 PC Set-Up and Maintenance (1)</td>
<td>☐ CSCI 3020 Database Advanced Topics (3)</td>
</tr>
<tr>
<td>☐ CSCI 1510 Student in University (3) (If you do not pass CSCI 1510, you must take another approved major elective in its place)</td>
<td>☐ CSCI 3110 Adv. Topics in Web Development (3)</td>
</tr>
<tr>
<td>☐ CSCI 1900 Math for Computer Science (3)</td>
<td>☐ CSCI 3720 Fund. of Business Info. Systems (3)</td>
</tr>
<tr>
<td>☐ CSCI 2020 Fundamentals of Database (3)</td>
<td>☐ CSCI 4417 Intro to System Administration (3)</td>
</tr>
<tr>
<td>☐ CSCI 2150 Computer Organization (3)</td>
<td>☐ CSCI 4927 Human &amp; Computer Interaction (3)</td>
</tr>
<tr>
<td>☐ CSCI 3250 Software Engineering I (3)</td>
<td>☐ CSCI 4800 Senior Project in IT (3)</td>
</tr>
<tr>
<td>☐ CSCI 3350 Software Engineering II (3)</td>
<td></td>
</tr>
<tr>
<td>☐ CSCI 3400 Networking Fundamentals (3)</td>
<td></td>
</tr>
<tr>
<td>☐ CSCI 3500 Information Security and Assurance (3)</td>
<td></td>
</tr>
</tbody>
</table>

* (At least one major elective must be at the 3XXX/4XXX level. CSCI 110X, 1200 or Co-op Ed. and Internships DO NOT count towards Major Electives)

<table>
<thead>
<tr>
<th>Major Electives (9 hours)</th>
<th>Free Electives (10 hours) (13 hours if CSCI 1100 is not taken)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ APPROVED major Elective CSCI _________(3)*</td>
<td>☐ ___________________________<em>(</em>)</td>
</tr>
<tr>
<td>☐ APPROVED major Elective CSCI _________(3)*</td>
<td>☐ ___________________________<em>(</em>)</td>
</tr>
<tr>
<td>☐ APPROVED major Elective CSCI _________(3)*</td>
<td>☐ ___________________________<em>(</em>)</td>
</tr>
</tbody>
</table>

* (At least one major elective must be at the 3XXX/4XXX level. CSCI 110X, 1200 or Co-op Ed. and Internships DO NOT count towards Major Electives)
Catalog Year 2017-2018

Information Technology (IT) Prerequisite Courses Tree (prerequisites can change)

CSCI 1250 (4 cr)
Introduction to Computer Science I
(Must have a B- or better to proceed)

CSCI 1900 (3 cr)
Math for Computer Science

CSCI 1100 (3 cr)
Using Information Technology

Freshman Experience Course
CSCI1510 or ETSU1020
(3 cr)

CSCI 1710 (3 cr)
Web Design and Development

CSCI 2020 (3 cr)
Fundamentals of Database

CSCI 1260 (4 cr)
Introduction to Computer Science II
(Must have a B- or better to proceed)

CSCI 2150 (3 cr)
Computer Organization

CSCI 1400 (1 cr)
PC Set-Up and Maintenance

CSCI 2910 (4 cr)
Server Side Web Programming

CSCI 3720 (3 cr)
Fundamentals of Business IS

CSCI 2200 (3 cr)
Unix

CSCI 3400 (3 cr)
Network Fundamentals

CSCI 3020 (3 cr)
Database Advanced Topics

CSCI 3110 (3 cr)
Advanced Web
Or CSCI 4617 (3 cr)
XML

CSCI 4417 (3 cr)
Introduction to System Administrator

CSCI 3500 (3 cr)
Information Security and Assurance

CSCI 4417 (3 cr)
Introduction to System Administrator

CSCI Major Elective

CSCI Major Elective

CSCI 3250 (3 cr)
Software Engineering I

CSCI 3120 (3 cr)
Advanced Database

CSCI 4227 (3 cr)
Human Computer Interaction

CSCI 4800 (3 cr)
Senior Project in IT
(within 2 semesters of graduating as a Computing Major)

CSCI 3000+ Major Elective

CSCI 3350 (3 cr)
Software Engineering II

CSCI 3500+ Major Elective
Possible Electives for Concentrations

- All Concentrations
  - CSCI 1720 – Intermediate Topics in Web Development
  - CSCI 4157 – Interactive Graphics
  - CSCI 4317 – Internet and Computer Law
  - CSCI 4507 – Computer Forensics
  - CSCI 4537 – Ethical Hacking
  - CSCI 4900 – Independent Study
  - CSCI 4910 – Selected Topics in Computer Science
  - CSCI 4957 – Special Topics in Computer Science

- CS Concentrations
  - CSCI 1710 – Web Design and Development
  - CSCI 2910 – Server-Side Web Programming
  - CSCI 3020 – Database Advanced Topics
  - CSCI 3720 – Fundamentals of Business Information Systems
  - CSCI 4417 – Intro to System Administration
  - CSCI 4757 – IS Implementation
  - CSCI 4767 – Enterprise Programming
  - CSCI 4927 – Human Computer Interaction

- IS Concentrations
  - CSCI 2200 – Unix Fundamentals
  - CSCI 2160 – Assembly Language
  - CSCI 2210 – Data Structures
  - CSCI 3230 – Algorithms
  - CSCI 4417 – Introduction to System Administration
  - CSCI 4717 – Computer Architecture
  - CSCI 4727 – Operating Systems
  - CSCI 4927 – Human Computer Interaction
  - One course related to emphasis area

- IT Concentrations
  - CSCI 2160 – Assembly Language
  - CSCI 2210 – Data Structures
  - CSCI 3230 – Algorithms
  - CSCI 4717 – Computer Architecture
  - CSCI 4727 – Operating Systems
  - CSCI 4757 – IS Implementation
  - CSCI 4767 – Enterprise Programming
GRADUATION REQUIREMENTS

To earn a Bachelor of Science degree in Computing, you must:

- Complete CSCI 1100 or the UIT Proficiency Exam
- Complete 124 credit hours, including the ETSU General Education Requirements, the common computing core, and the concentration-specific courses.
- Earn a “B-“or better in CSCI 1250 and CSCI 1260. This requirement holds for minors and majors alike.
- Earn a “C-“or better in all other CSCI major requirements other than CSCI 1250 and CSCI 1260.
- Complete all required courses in at most three attempts. An attempt is defined as registering for and remaining enrolled in a course after the third week of the semester. (Withdrawing from a course after the third week of the semester is considered an attempt.) Computing majors and minors will be required to change their program of study if these requirements cannot be met.
- Achieve a grade of “C” or better in ENGL 1010 and ENGL 1020
- Attain a GPA of 2.5 or better overall
- Attain a GPA of 2.5 or better in all computing courses
- Complete the California Critical Thinking Skills Test (CCTST) (Senior Exit Exam) or other designated exit exam by the university.
Computer Science (CS) Concentration Sample 4 Year Plan

(4-year plans are meant to help students with planning their academic career. This plan serves as a guide and does not guarantee courses will be offered during the given semester or that a student can register for the courses at the given time. Some courses can be taken at different semesters than stated in the plan below.)

<table>
<thead>
<tr>
<th>First Year</th>
<th>First Semester</th>
<th>Second Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCI 1250 Introduction to Computer Science I</td>
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<td>CSCI 1260 Introduction to Computer Science II</td>
</tr>
<tr>
<td>CSCI 1900 Math for Computer Science</td>
<td>3 cr</td>
<td>CSCI 2020 Fundamentals of Database</td>
</tr>
<tr>
<td>CSCI 1100 Using Information Technology</td>
<td>3 cr</td>
<td>ENGL 1020 Critical Thinking &amp; Argumentation</td>
</tr>
<tr>
<td>CSCI 1510 Student in University</td>
<td>3 cr</td>
<td>Oral Communication Choice</td>
</tr>
<tr>
<td>ENGL 1010 Critical Reading &amp; Exp. Writing</td>
<td>3 cr</td>
<td>MATH 1530 Probability &amp; Statistics</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<tbody>
<tr>
<td>CSCI 2150 Computer Organization</td>
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<td>Fine Arts Choice</td>
</tr>
<tr>
<td>CSCI 2200 Unix Fundamentals</td>
<td>3 cr</td>
<td>CSCI 2210 Data Structures</td>
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<tr>
<td>MATH 1910 Calculus I</td>
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<td>MATH 1920 Calculus II</td>
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<td>3 cr</td>
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Information Systems (IS) Concentration Sample 4 Year Plan

(4-year plans are meant to help students with planning their academic career. This plan serves as a guide and does not guarantee courses will be offered during the given semester or that a student can register for the courses at the given time. Some courses can be taken at different semesters than stated in the plan below.)

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<td><strong>First Semester</strong></td>
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<tr>
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<tr>
<td>CSCI 1100 Using Information Technology</td>
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<tr>
<td>CSCI 1510 Student in University</td>
<td>3 cr</td>
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<tr>
<td>ENGL 1010 Critical Reading &amp; Exp. Writing</td>
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<tr>
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<td>CSCI 1400 PC Set-Up and Maintenance</td>
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<tr>
<td>CSCI 2150 Computer Organization</td>
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<td>CSCI 2020 Fundamentals of Database</td>
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<tr>
<td>CSCI 3020 Database Advanced Topics</td>
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<td>CSCI 4757 IS Implementation</td>
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<td>CSCI 3500 Information Security and Assurance</td>
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</tr>
<tr>
<td>1st Lab Science Choice</td>
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<tr>
<td>Emphasis Course</td>
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<td><strong>Eighth Semester</strong></td>
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<tr>
<td>History Choice</td>
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<tr>
<td>CSCI 3350 Software Engineering II</td>
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<td>Literature Choice</td>
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<td>Emphasis Course</td>
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Information Technology (IT) Concentration Sample 4 Year Plan

(4-year plans are meant to help students with planning their academic career. This plan serves as a guide and does not guarantee courses will be offered during the given semester or that a student can register for the courses at the given time. Some courses can be taken at different semesters than stated in the plan below.)

<table>
<thead>
<tr>
<th>First Year</th>
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<th>Second Semester</th>
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<td><strong>First Semester</strong></td>
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<tr>
<td>CSCI 1900 Math for Computer Science</td>
<td>3 cr</td>
<td>CSCI 1710 Web Design and Development</td>
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<td>CSCI 1100 Using Information Technology</td>
<td>3 cr</td>
<td>ENGL 1020 Critical Thinking &amp; Argumentation</td>
<td>3 cr</td>
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<td>CSCI 1510 Student in University</td>
<td>3 cr</td>
<td>Oral Communication Choice</td>
<td>3 cr</td>
</tr>
<tr>
<td>ENGL 1010 Critical Reading &amp; Exp. Writing</td>
<td>3 cr</td>
<td>MATH 1530 Probability &amp; Statistics</td>
<td>3 cr</td>
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<table>
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<td><strong>Third Semester</strong></td>
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<tr>
<td>CSCI 1400 PC Set-Up and Maintenance</td>
<td>1 cr</td>
<td>CSCI 2910 Server Side Web Programming</td>
<td>4 cr</td>
</tr>
<tr>
<td>CSCI 2150 Computer Organization</td>
<td>3 cr</td>
<td>CSCI 3400 Networking Fundamentals</td>
<td>3 cr</td>
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<tr>
<td>CSCI 2020 Fundamentals of Database</td>
<td>3 cr</td>
<td>History Choice</td>
<td>3 cr</td>
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<tr>
<td>CSCI 2200 Unix Fundamentals</td>
<td>3 cr</td>
<td>1st Lab Science Choice</td>
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<td>History Choice</td>
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<td>Free Elective Choice</td>
<td>1 cr</td>
</tr>
<tr>
<td>Literature Choice</td>
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<tr>
<td><strong>16 cr</strong></td>
<td><strong>15 cr</strong></td>
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<tr>
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<th>Sixth Semester</th>
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<tbody>
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<td><strong>Fifth Semester</strong></td>
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<tr>
<td>CSCI 3020 Database Advanced Topics</td>
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<td>CSCI 3250 Software Engineering I</td>
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<td>CSCI 3720 Fundamentals of Business IS</td>
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<td>CSCI 3500 Information Security and Assurance</td>
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<td>Social &amp; Behavioral Science Choice</td>
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<td>CSCI Elective Choice</td>
<td>3 cr</td>
<td>2nd Lab Science (Same Series as 1st choice)</td>
<td>4 cr</td>
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<tr>
<td>Social &amp; Behavioral Science Choice</td>
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<tr>
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<th>Eighth Semester</th>
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<tbody>
<tr>
<td><strong>Seventh Semester</strong></td>
<td><strong>Eighth Semester</strong></td>
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</tr>
<tr>
<td>CSCI 3110 Advanced Topics in Web Development</td>
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<td>CSCI 4800 Senior Project</td>
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<td>CSCI 3350 Software Engineering II</td>
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<td>CSCI 4927 Human and Computer Interaction</td>
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<td>CSCI 4417 Introduction to System Administrator</td>
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<td>CSCI Elective Choice (3/4000 Level)</td>
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<tr>
<td><strong>15 cr</strong></td>
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Computing Minor Requirements

Name: ____________________________
ENumber: ____________________________

- CSCI 1250 Intro. to Computer Science I 4 cr.
- CSCI 1900 Math for Computer Science 3 cr.
- CSCI 1260 Intro. to Computer Science II 4 cr.
- Approved CSCI Elective (Recommend a 2xxx Level Course) 3 cr.
- CSCI 3xxx or 4xxx Level Course 3 cr.
- CSCI 3xxx or 4xxx Level Course 3 cr.
- CSCI 3xxx or 4xxx Level Course 3 cr.

Total Credit Hours: 23 cr.

### Minor Suggested Course Sequence based on Interests

<table>
<thead>
<tr>
<th>Business Interest</th>
<th>Programming Interest</th>
<th>Networking &amp; Security Interest</th>
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<tr>
<td>Software Engineering I (3)</td>
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23 Credit Hours 25 Credit Hours 24 Credit Hours