Because of the influence and leadership roles we expect graduates to have, our students will be encouraged to develop high moral and ethical standards as well as being conversant with and compliant with professional performance standards.

Professionals in this discipline are also proficient in understanding user needs and communicating technical issues to the organizations and people affected by the computer system. They are “anxiously engaged” in lifelong learning to understand and wisely use new technologies as they become available. Broadly educated at the university level, these professionals have acquired balance in their lives and depth of understanding in technology and its relevance in the broader world context.

Information technology (IT), the technical discipline that solves problems using computing resources, will be taught through a combination of strong theoretical coursework and practical application to ensure that all three aspects of the technological educational triumvirate (knowing, thinking, doing) are included. IT professionals from this discipline are competent to design computing systems with due consideration of the performance and compatibility aspects of hardware, software, and digital communication and networking. They can visualize, structure, and implement complex technical solutions.

*Hist 220 or Pl Sc 110 combined with the required Econ 110 course can fill the American Heritage requirement.

Note: Students are encouraged to complete an average of 15 credit hours each semester or 30 credit hours each year, which could include spring and/or summer terms. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

Note: IT 447 includes the requirement of 200 hours of approved IT work experience (any paid experience involving any of the IT&C domains of computing, which include networking, human-computer interaction, databases, web systems, programming, cybersecurity, and computer application domains). See sot.et.byu.edu/advisement/work-experience for more details.
The BS in Information Technology (396526) 2019-2020 Program Requirements (78 Credit Hours)

**REQUIREMENT 1** Complete 8 courses
- CS 142 - Introduction to Computer Programming 3.0
- CS 235 - Data Structures and Algorithms 3.0
- CS 236 - Discrete Structures 3.0
- *ENGL 316 - Technical Communication 3.0
- *MATH 112 - Calculus 1 4.0
- PHSCE 121 - Introduction to Newtonian Mechanics 3.0
- STAT 201 - Statistics for Engineers and Scientists 3.0
- TECH 112 - Exploration in Innovation Design Techniques 1.0

**REQUIREMENT 2** Complete 1 course
- ENGT 231 - Foundations of Global Leadership 3.0
- IT&C 231 - Ethics, Globalization, & Leadership 3.0

**REQUIREMENT 3** Complete 1 course
- ECON 110 - Economic Principles and Problems 3.0
- PSYCH 111 - Introduction to Psychological Science 3.0

**REQUIREMENT 4** Complete 14 courses
NOTE: IT&C 210B AND 252 MUST BE COMPLETED WITH A C OR HIGHER GRADE PRIOR TO ENROLLMENT IN 300-LEVEL IT COURSES.
- IT&C 101 - Cornerstone: Information Technology & Cybersecurity 3.0
- IT&C 124 - Introduction to Computer Systems 3.0
- IT&C 210A - Fundamentals of Web-Based Information Technology 2.0
- IT&C 210B - Fundamentals of Web-Based Information Technology 2.0
- IT&C 252 - Computer Architecture and Organization 3.0
- IT&C 255 - Human-Computer Interaction 3.0
- IT&C 293 - Professional Seminar 0.5
- IT&C 327 - Digital Communications 4.0
- IT&C 344 - Operating Systems 3.0
- IT&C 347 - Computer Networks 3.0
- IT&C 350 - Database Principles and Applications 3.0
- IT&C 366 - Information Assurance and Security 3.0
- IT&C 446 - Senior Project / Capstone 1 3.0
- IT&C 447 - Senior Projects/Capstone 2 3.0

**REQUIREMENT 5** Complete 1.5 hours from the following course(s)
**TAKE THE FOLLOWING 3 TIMES:**
- IT&C 291R - Seminar 0.5
  You may take up to 1 credit hour.

**REQUIREMENT 6** Complete 9.0 hours from the following course(s)
**COURSES OUTSIDE OF THOSE LISTED HERE MUST BE PRE-APPROVED BY THE PROGRAM.**
- IT&C 410 - Advanced Web Technologies 3.0

**COURSES TO COMPLETE 3 TIMES:**
- IT&C 441 - Embedded Computer Systems 3.0
- IT&C 450 - Database Administration 3.0
- IT&C 492R - Special Problems in Information Technology & Cybersecurity 3.0
- IT&C 515R - Special Topics in Information Technology & Cybersecurity 3.0
- IT&C 529 - Advanced Networking 3.0
- IT&C 544 - System Administration 3.0
- IT&C 548 - Cyber-Physical Systems 3.0
- IT&C 555 - Advanced Human-Computer Interaction 3.0
- IT&C 566 - Digital Forensics 3.0
- IT&C 567 - Cybersecurity and Penetration Testing 3.0

**REQUIREMENT 7**
Students must complete 200 hours of pre-approved information technology-related work after declaring the major and must submit a signed letter from an employer during the IT&C 447 course.

**REQUIREMENT 8**
Complete department packet and exit interview.

**THE DISCIPLINE:**
Information technology (IT), the technical discipline that solves problems using computing resources, will be taught through a combination of strong theoretical course work and practical application to ensure that all three aspects of the technological educational triumvirate (knowing, thinking, doing) are included. IT professionals from this discipline are competent to design computing systems with due consideration of the performance and compatibility aspects of hardware, software, and digital communication and networking. They can visualize, structure, and implement complex technical solutions.

Professionals in this discipline are also proficient in understanding user needs and communicating technical issues to the organizations and people affected by the computer system. They are “anxiously engaged” in lifelong learning to understand and wisely use new technologies as they become available. Broadly educated at the university level, these professionals have acquired balance in their lives and depth of understanding in technology and its relevance in the broader world context.

Because of the influence and leadership roles we expect graduates to have, our students will be encouraged to develop high moral and ethical standards as well as being conversant with and compliant with professional performance standards.

**CAREER OPPORTUNITIES:**
Career opportunities are plentiful and rewarding in both large and small companies in technical fields. Graduates will find careers in computer networking, testing, embedded intelligence, digital communications, computer system development, and integration.

**MAP DISCLAIMER**
While every reasonable effort is made to ensure accuracy, there are some student populations that could have exceptions to listed requirements. Please refer to the university catalog and your college advisement center/department for complete guidelines.

**DEPARTMENT INFORMATION**
Information Technology & Cybersecurity
School of Technology
265 Crabtree Building
Brigham Young University Provo, UT 84602
Telephone: 801-422-6300

**ADVISEMENT CENTER INFORMATION**
Rachel Terry, Academic Advisor, School of Technology
250 Snell Building
Brigham Young University Provo, UT 84602
Telephone: 801-422-1818
sot_advisement@byu.edu