

Information Science & Technology, B.A.

Learn more about the Bachelor of Arts in Information Science and Technology.

Students in the Information Science and Technology (IS&T) curriculum develop the skills and the knowledge necessary to analyze information problems and to apply current technology to their solution. The emphasis is to develop problem-solving and communication skills.

The technologies and methods include databases, web and mobile application development, client-server computing, network security, project management, software engineering principles, and quality assurance methodologies. A two-semester capstone project course is required. This course is designed to help students integrate what they have learned in other courses and apply this knowledge in the design and implementation of a software application.

The program is targeted for students who have a strong interest in applying computing technologies to solving problems in business, education, science, and government agencies. Our IS&T graduates are also involved in innovative product developments. They hold jobs as consultants, network engineers, business and systems analysts, database administrators, and web and application developers.

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Bachelor of Arts

Summary of Requirements for the Degree

1. University Requirements (123 total s.h.)
 - MATH 0701 (4 s.h.) and/or ENG 0701 (4 s.h.), if required by placement testing.
 - All Temple students must take a minimum of two writing intensive courses at Temple as part of their major. Following is a list of courses that can be used to satisfy the writing-intensive requirement: CIS 4296 and CIS 4396.
 - Students must complete the General Education (GenEd) requirements.
 - See the General Education section of the *Undergraduate Bulletin* for the GenEd curriculum.
 - Students who complete CST majors typically receive a waiver for 2 Science & Technology (GS) and 1 Quantitative Literacy (GQ) GenEd courses.
 - Students must satisfy general Temple University residency requirements.
2. College Requirements
 - 90 credits within the College of Science & Technology (CST) or the College of Liberal Arts (CLA).
 - 45 Upper Level (2000+) credits within the College of Science & Technology (CST) or the College of Liberal Arts (CLA).
 - Two (2) Upper Level (2000+) Liberal Art courses.
 - Second (2nd) Level of a Foreign Language (1002).
 - First Year Seminar Requirement: All students in the College of Science & Technology (CST) are required to take a 1 credit first year seminar course, SCTC 1001 CST First Year Seminar. Other courses that fulfill this requirement may be found on the CST College Requirements page. Only one course in this category may count towards graduation.
3. Major Requirements for Bachelor of Arts (64 s.h.)

At least 7 courses required for the major must be completed at Temple. At least 6 CIS courses must be completed at Temple.

Code	Title	Credit Hours
Computer & Information Science		
CIS 1001	Introduction to Academics in Computer Science	1
CIS 1051 or CIS 1057	Introduction to Problem Solving and Programming in Python Computer Programming in C	4

CIS 1068	Program Design and Abstraction	4
or CIS 1968	Honors Program Design and Abstraction	
CIS 1166	Mathematical Concepts in Computing I	4
or CIS 1966	Honors Mathematical Concepts in Computing I	
CIS 2109	Database Management Systems	4
CIS 2168	Data Structures	4
CIS 2229	Architecture, Operating Systems and Networking	4
CIS 3309	Component-Based Software Design	4
CIS 3329	Network Architectures	4
CIS 3342	Server-Side Web Application Development	4
CIS 3344	Client-Side Scripting for the Web	4
CIS 4296	Information Systems Analysis and Design	4
CIS 4396	Information Systems Implementation	4
Mathematics		
MATH 2031	Probability and Statistics	3
Select one of the following: ¹		4
MATH 1031	Differential and Integral Calculus	
MATH 1041	Calculus I	
MATH 1941	Honors Calculus I	
Laboratory Science courses		
Two (2) laboratory science courses ²		8
Total Credit Hours		64

¹ IS&T majors are required to have completed MATH 1022. They can then choose either MATH 1031, MATH 1041 or MATH 1941.

² Must select within a Sequence for Laboratory Science A and Laboratory Science B. See the Sequenced Laboratory Science list below for the science options.

Sequenced Information Science and Technology Laboratory Science Requirements

Code	Title	Credit Hours
Biology Sequence		
Select one Biology Lab Science A:		
BIOL 1011	General Biology I	
BIOL 1111	Introduction to Organismal Biology	
BIOL 1911	Honors Introduction to Organismal Biology (S)	
Select one Biology Lab Science B:		
BIOL 1012	General Biology II	
BIOL 2112	Introduction to Cellular and Molecular Biology	
BIOL 2912	Honors Introduction to Cellular and Molecular Biology (F)	
Chemistry Sequence ¹		
Select one Chemistry Lab Science A:		
CHEM 1021 & CHEM 1023	Introduction to Chemistry I and Introduction to Chemistry Laboratory I	
CHEM 1031 & CHEM 1033	General Chemistry I and General Chemistry Laboratory I	
CHEM 1951 & CHEM 1953	Honors General Chemical Science I and Honors Chemical Science Laboratory I	
Select one Chemistry Lab Science B:		
CHEM 1022 & CHEM 1024	Introduction to Chemistry II and Introduction to Chemistry Laboratory II	
CHEM 1032 & CHEM 1034	General Chemistry II and General Chemistry Laboratory II	

CHEM 1952 & CHEM 1954	Honors General Chemical Science II and Honors Chemical Science Laboratory II
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Earth & Environmental Science Sequence ²**Select this Lab Science A:**

EES 2001	Physical Geology
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Select one Lab Science B (both have co-requisite):

EES 2011	Mineralogy I (with CHEM 1031 co-requisite)
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EES 2061	Introduction to Geochemistry (with CHEM 1031 co-requisite)
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Physics Sequence ³**Select one Physics Lab Science A:**

PHYS 1021	Introduction to General Physics I
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PHYS 1061	Elementary Classical Physics I
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PHYS 1961	Honors Elementary Classical Physics I (F)
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PHYS 2021	General Physics I
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PHYS 2921	Honors General Physics I (F)
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Select one Physics Lab Science B:

PHYS 1022	Introduction to General Physics II
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PHYS 1062	Elementary Classical Physics II
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PHYS 1962	Honors Elementary Classical Physics II (S)
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PHYS 2022	General Physics II
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PHYS 2922	Honors General Physics II (S)
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¹ Students can choose to mix-and-match the Chemistry Sequence A and B courses. However, they must take at least 1 course from Chemistry Sequence A and 1 from Chemistry Sequence B. Note: Chemistry courses consist of a three-credit lecture plus a one-credit lab.

² The Earth & Environmental Science (EES) sequence will require students to take CHEM 1031 as a co-requisite to either of the two EES Sequence B courses.

³ Students can choose to mix-and-match the Physics Sequence A and B courses. However, they must take at least 1 course from Physics Sequence A and 1 from Physics Sequence B.

Calculation of Major GPA

Courses listed under the major requirements for the degree will be included in the calculation of the major GPA. Courses that could not apply toward the major as an elective or required course would not be counted in the calculation of the major GPA. This would include CIS 1056, for example.

Distinction in Major

To graduate with Distinction in Major, students are required to have a 3.50 or higher grade point average (GPA) both in the major and overall, as well as be recommended by the department of Computer & Information Sciences.

Suggested Academic Plan

Bachelor of Arts in Information Science & Technology

Requirements for New Students starting in the 2020-2021 Academic Year

Year 1		Credit Hours
Fall		
CIS 1001	Introduction to Academics in Computer Science	1
Select one of the following:		4
CIS 1051	Introduction to Problem Solving and Programming in Python	
CIS 1057	Computer Programming in C	
Select one of the following: ¹		4
MATH 1031	Differential and Integral Calculus	
MATH 1041	Calculus I	
MATH 1941	Honors Calculus I	
SCTC 1001	CST First Year Seminar	1
General Education/Elective Credits		5
Term Credit Hours		15

Spring		
CIS 1068 or 1968	Program Design and Abstraction	4
CIS 1166 or 1966	Mathematical Concepts in Computing I	4
General Education/Elective Credits		7
Term Credit Hours		15
Year 2		
Fall		
MATH 2031	Probability and Statistics	3
CIS 2168	Data Structures	4
General Education/Elective Credits		8
Term Credit Hours		15
Spring		
CIS 2109	Database Management Systems	4
CIS 2229	Architecture, Operating Systems and Networking	4
General Education/Elective Credits		8
Term Credit Hours		16
Year 3		
Fall		
CIS 3309	Component-Based Software Design	4
CIS 3344	Client-Side Scripting for the Web	4
IST Laboratory Science A		4
General Education/Elective Credits		4
Term Credit Hours		16
Spring		
CIS 3329	Network Architectures	4
CIS 3342	Server-Side Web Application Development	4
IST Laboratory Science B		4
General Education/Elective Credits		4
Term Credit Hours		16
Year 4		
Fall		
CIS 4296	Information Systems Analysis and Design [WI]	4
General Education/Elective Credits		12
Term Credit Hours		16
Spring		
CIS 4396	Information Systems Implementation [WI]	4
General Education/Elective Credits		10
Term Credit Hours		14
Total Credit Hours:		123

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