

Information Systems and Analytics, BS

Program Description

Information Systems and Analytics is among the most in-demand majors today. More than ever before, organizations are seeking to derive actionable insights from large amounts of data to maintain their competitive advantage. Multiple career tracks in the Information Systems and Analytics Degree allow students to customize their education to fit their interests, develop new skills, and enhance their marketability to employers in a wide range of fields. Information Systems and Analytics mixes working with technology and people across a wide spectrum of disciplines.

Program Curriculum

120 credits

Utah Tech General Education Requirements

All Utah Tech General Education requirements must be fulfilled. A previously earned degree may fulfill those requirements, but courses must be equivalent to Utah Tech's minimum General Education standards in American Institutions, English, and Mathematics.

Code	Title	Hours
General Education Core Requirements (catalog.utahtech.edu/programs/generaleducation/#gerequirementstext)		
English		3-7
Mathematics		3-5
American Institutions		3-6
Life Sciences		3-10
Physical Sciences		3-5
Laboratory Science		0-1
Fine Arts		3
Literature/Humanities		3
Social & Behavioral Sciences		3
Exploration		3-5

Business Core Requirements

Code	Title	Hours
ACCT 2010	Financial Accounting	3
ACCT 2020	Managerial Accounting	3
ISA 2010	Proficiency in Excel & SQL	3
ECON 2010	Micro Economics (SS, GC)	3
ISA 2050	Management Information Systems	3
FIN 3150	Managerial Finance I	3
MGMT 3050	Business Law I: Law in the Commercial Environment	3
MGMT 3100	Business Ethics and Professional Writing	3
MGMT 3400	Management & Organizations	3
MGMT 4800	Strategic Management (ALPP)	3
MKTG 3010	Marketing Principles (ALPP)	3
STAT 2040	Business Statistics	3

Information Systems & Analytics Core Requirements

Code	Title	Hours
IT 1100	Introduction to Unix/Linux	3
CS 1400	Fundamentals of Programming	3
SE 1400	Web Design Fundamentals (ALCS)	3
MATH 2050	Applied Statistics with Programming	3

IT 2400	Intro to Networking	3
IT 2700	Information Security	3
ISA 3001	Info Sys and Analytics Intermediate Career Strategies	1
ISA 3020	SQL & Python for Analytics	3
MGMT 3600	Operations and Supply Chain Management (ALPP)	3
MGMT 4040	Quantitative Decision Analysis	3
ISA 4450	Project Management	3
ISA 4600 or MGMT 4200R	Senior Project (MGMT 4200 - Internship must be ISA related.) Business Internship	3

Information Systems & Analytics Elective Requirements

Code	Title	Hours
12 credits from the following or other approved courses		12

Students may take any of the courses listed below or other approved electives. The elective list below has been divided into suggested tracks. Students should contact their academic advisor for more information on choosing elective coursework. At least 6 credits must be from upper division classes.

Code	Title	Hours
Analytics Track Suggested Courses		

IT 2300	Database Design & Management	3
IT 2500	Cloud Computing	3
IT 4310	Database Administration	3
FIN 4380	Financial Modeling and Decision Making	3
ISA 4060	Big Data Analytics	3
ISA 4070	Data Visualization and Storytelling	3
MATH 4800	Industrial Careers in Mathematics	3

Code	Title	Hours
Systems Track Suggested Courses		

IT 1200	A+ Computer Hardware/Windows OS	3
IT 2300	Database Design & Management	3
IT 2500	Cloud Computing	3
IT 3100	Systems Design and Administration	3
IT 3110	System Automation	3
IT 3150	Windows Servers	3
IT 3300	DevOps Virtualization	3
IT 4100	Files Systems and Storage Technologies	3
IT 4200	DevOps Lifecycle Management	3
IT 4310	Database Administration	3
IT 4400	Network Design & Management	3
IT 4510	Ethical Hacking & Network Defense	3

Code	Title	Hours
Web Development Track Suggested Courses		

DES 1300	Design I	3
IT 4200	DevOps Lifecycle Management	3
SE 3400	Human-Computer Interaction	3
SE 3500	Tech Entrepreneurship	3
SE 3550	Online Marketing and SEO (ALCS)	3

Code	Title	Hours
Application Development Track Suggested Courses		

CS 1410	Object Oriented Programming	3
CS 2420	Introduction to Algorithms and Data Structures	3
CS 3005	Programming in C++	3

CS 3010	Mobile Application Development for Android	3
CS 3020	Mobile Application Development: iOS	3
CS 3500	Application Development	3

Graduation Requirements

1. Complete a minimum of 120 college-level credits (1000 and above).
2. Complete at least 40 upper-division credits (3000 and above).
3. Complete at least 30 upper-division credits at Utah Tech for institutional residency.
4. Cumulative GPA 2.0 or higher.
5. "C-" or higher grade in the business core, IS&A core, and IS&A elective courses and an overall GPA of at least 2.5 in course work required for the major.

Graduation Plan

1st Year

Fall Semester	Hours	Spring Semester	Hours
SSC 1010		2 ACCT 2010	3
ISA 2010		3 ENGL 2010	3
ENGL 1010		3 IT 1100	3
SE 1400		3 General Education (Fine Arts) (catalog.utahtech.edu/programs/generaleducation/#gerequirementstext)	3
General Education (Mathematics-MATH 1040 recommended) (catalog.utahtech.edu/programs/generaleducation/#gerequirementstext)		3 General Education (Life Sciences & Lab) (catalog.utahtech.edu/programs/generaleducation/#gerequirementstext)	4
General Elective		1	
		15	16

2nd Year

Fall Semester	Hours	Spring Semester	Hours
ACCT 2020		3 IT 2400	3
CS 1400		3 ECON 2010	3
MGMT 3400		3 MKTG 3010	3
STAT 2040		3 General Education (Physical Sciences) (catalog.utahtech.edu/programs/generaleducation/#gerequirementstext)	3
General Education (Social & Behavioral Sciences) (catalog.utahtech.edu/programs/generaleducation/#gerequirementstext)		3 General Education (American Institutions) (catalog.utahtech.edu/programs/generaleducation/#gerequirementstext)	3
		15	15

3rd Year

Fall Semester	Hours	Spring Semester	Hours
MATH 2050		3 FIN 3150	3
IT 2700		3 ISA 2050	3
ISA 3001		1 ISA 3020	3
MGMT 4040		3 IS&A or other Elective	3
IS&A Elective		3 IS&A Elective	3
General Education (Literature/Humanities) (catalog.utahtech.edu/programs/generaleducation/#gerequirementstext)		3	
		16	15

4th Year

Fall Semester	Hours	Spring Semester	Hours
MGMT 3050		3 MGMT 4800	3
MGMT 3100		3 ISA 4600 (Internship option must be ISA-related)	3
MGMT 3600		3 ISA 4450	3
IS&A Elective		3 IS&A Upper Division or other Upper Division Elective	3
IS&A Upper Division Elective		3 General Elective	1
		15	13

Total Hours 120**BS Information Systems & Analytics Program Learning Outcomes**

At the successful conclusion of this program, students will be able to:

1. Evaluate real world business situations related to the core business functions of accounting, economics, finance, qualitative analysis, information systems, international business, legal and social environments, marketing & management.
2. Analyze real world business situations by identifying relevant business issues, performing appropriate quantitative and qualitative data analysis and synthesis, formulating viable courses of action.
3. Create and deliver professional quality oral presentations and written work products.
4. Analyze real world business situations by identifying relevant ethical issues, evaluating and synthesizing information, and formulating ethical courses of action.
5. Integrate current processes, technology, and analytical methods to provide actionable recommendations for decision makers.
6. Complete at least one industry certification that relates to the student's career path.