

Information Systems - Applied Artificial Intelligence Emphasis, B.S.

Visit the Information Systems and Technology Department page (<https://www.uvu.edu/ist/>) for more information on the program and access to advising.

Program Description

The Information Systems - Applied Artificial Intelligence Emphasis, B.S. equips students with a robust foundation in AI systems design, AI technology identification, and AI solution development. The program combines comprehensive information systems knowledge with specialized AI skills, thereby empowering graduates to create and implement cutting-edge AI solutions. Students will gain expertise in computer programming, data management, networking, systems analysis, ethics, business automation, and content production to prepare graduates to drive innovation and effectively address real-world challenges with AI technologies.

Program Requirements

Code	Title	Credit Hours
Total Credit Hours		120
Information Systems Requirements		90
		Credits
Complete core requirements		90
Applied AI Emphasis Required Courses		24
		Credits
INFO 2500	Applied Artificial Intelligence Concepts in Organizations	3
INFO 3500	AI in Learning and Communication	3
DWDD 2420	Media Formats and Outputs	3
PHIL 3250	Ethics of AI	3
MKTG 3700	Fundamentals of Product Management	3
MGMT 3410	AI Workflow Operations Automation	3
MGMT 3510	AI Workflow Operations Automation II	3
INFO 4500	Applied AI Capstone Project	3
Emphasis Elective Requirements	At least one elective course must be upper division.	6
		Credits
Complete 6 credit hours from the following:		6
INFO 4410	Database Administration (3)	
INFO 4130	Data Science and Big Data Analytics (3)	
INFO 3360	Server-Side Web Frameworks (3)	
INFO 4420	Mobile Application Development (3)	
MGMT 2240	Business Quantitative Analysis (3)	
CYBR 4450	Internet of Things Security (3)	
CYBR 3350	Intellectual Property and Cyber Law (3)	
PHIL 2000	Formal Logic I (3)	
PHIL 3000	Formal Logic II (3)	
CYBR 4350	Web and Application Security (3)	
INFO 4300	Enterprise Web Development (3)	
INFO 4120	Data Visualization (3)	
INFO 4810R	Internship (3)	
CS 2550	Web Programming I (3)	
CS 3270	Python Software Development (3)	
CS 3410	Human Factors in Software Development (3)	
CS 3660	Web Programming II (3)	
Other approved Information Systems or related courses		

Core Requirements

Code	Title	Credit Hours
Total Credit Hours		90
General Education Requirements		30 Credits
ENGL 1010 or ENGL 1005	Introduction to Academic Writing Foundations of Academic Writing	3
ENGL 2010	Intermediate Academic Writing	3
Math Requirement (GE): Complete one of the following:		3
MATH 1090	College Algebra for Business (3)	
MATH 1050	College Algebra (4)	
MATH 1055	College Algebra with Preliminaries (5)	
American Institutions: Complete one of the following:		3
HIST 2700 & HIST 2710	US History to 1877 and US History since 1877 (6)	
HIST 1700	American History (3)	
HIST 1740	US Economic History (3)	
POLS 1000	American Heritage (3)	
POLS 1100	American National Government (3)	
Distribution Courses:		
Biology Distribution		3
Physical Science Distribution		3
Fine Arts Distribution		3
Personal, Professional, and Civic Growth		3
Humanities Distribution		3
Social/Behavioral Science Distribution ¹		3
Discipline Core Requirements		60 Credits
Math Requirement:		
MGMT 2340	Business Statistics I	3
IS Core Requirements:		
INFO 1120	Information Systems and Technology Fundamentals	3
INFO 1200 or CS 1400	Computer Programming I for IS IT Fundamentals of Programming	3
INFO 2200	Computer Programming II for IS IT	3
INFO 2410	Database Fundamentals	3
INFO 2420	Web Application Design	3
IM 2600	Spreadsheet Applications	3
IT 1510	Introduction to System Administration--Linux/UNIX	3
IT 2600	Data Communication Fundamentals	3
CYBR 2700	Information Security Fundamentals	3
INFO 3130	Introduction to Applied Data Analytics	3
INFO 3300	Web Systems Development	3
INFO 3410	Database Systems and Warehousing	3
INFO 3430	Systems Analysis and Design	3
INFO 4050G	Global Ethical and Professional Perspectives in IS and IT	3
IS Environment/Business Foundation Requirements:		
MKTG 2200G	Written Business Communication	3
ACC 2110	Principles of Accounting I	3

MGMT 3000	Organizational Behavior	3
MKTG 3600	Principles of Marketing	3
Any 3-credit 1000 or 2000 level course from ACC, ECON, FIN, MGMT, HR, MKTG		3

¹ ECON 2010 Principles of Economics I recommended.

Graduation Requirements

1. Completion of at least 120 semester credits required in the BS degree; at least 40 credit hours must be upper-division courses.
2. Overall grade point average 2.0 or above with a minimum of 2.5 GPA in all discipline core, specialty core, and elective courses with no grade lower than a "C-."
3. Residency hours: Minimum of 30 credit hours through course attendance at UVU, with at least 10 hours earned in the last 45 hours.
4. Completion of GE and specified departmental requirements. Students are responsible for completing all prerequisite courses.
5. Successful completion of at least one Global/Intercultural course.
6. Successful completion of at least two Writing Enriched (WE) courses.

Graduation Plan

This graduation plan is a sample plan and is intended to be a guide. Your specific plan may differ based on your Math and English placement and/or transfer credits applied. You are encouraged to meet with an advisor and set up an individualized graduation plan in Wolverine Track (<http://www.uvu.edu/wolverinetrack/>).

First Year

Semester 1		Credit Hours
ENGL 1010	Introduction to Academic Writing	3
INFO 1120	Information Systems and Technology Fundamentals	3
Biology General Education		3
Personal, Professional and Civic Growth General Education <small>Recommend CYBR 1700</small>		3
Math General Education (Complete one of the following)		3
MATH 1090	College Algebra for Business	
MATH 1050	College Algebra	
MATH 1055	College Algebra with Preliminaries	
Credit Hours		15

Semester 2

ENGL 2010	Intermediate Academic Writing	3
INFO 1200	Computer Programming I for IS IT	3
INFO 2420	Web Application Design	3
MKTG 2200G	Written Business Communication	3
ACC 2110	Principles of Accounting I	3
Credit Hours		15

Second Year

Semester 3

MGMT 2340	Business Statistics I	3
IM 2600	Spreadsheet Applications	3
Any 3-credit 1000 or 2000 level course from ACC, ECON, FIN, MGMT, HR, MKTG		3
INFO 2410	Database Fundamentals	3
American Institutions General Education <small>See core BS-INFS requirements for course options</small>		3
Credit Hours		15

Semester 4

INFO 2200	Computer Programming II for IS IT	3
IT 1510	Introduction to System Administration--Linux/UNIX	3
IT 2600	Data Communication Fundamentals	3
Fine Arts General Education		3
Physical Science General Education		3
Credit Hours		15

Third Year

Semester 5

Humanities General Education		3
Social Science General Education		3
CYBR 2700	Information Security Fundamentals	3
INFO 2500	Applied Artificial Intelligence Concepts in Organizations	3

MGMT 3000	Organizational Behavior	3
Credit Hours		15
Semester 6		
INFO 3130	Introduction to Applied Data Analytics	3
INFO 3410	Database Systems and Warehousing	3
INFO 3500	AI in Learning and Communication	3
INFO 3430	Systems Analysis and Design	3
DWDD 2420	Media Formats and Outputs	3
Credit Hours		15
Fourth Year		
Semester 7		
MKTG 3600	Principles of Marketing	3
AI Elective		3
INFO 3300	Web Systems Development	3
PHIL 3250	Ethics of AI	3
MGMT 3410	AI Workflow Operations Automation	3
Credit Hours		15
Semester 8		
MGMT 3510	AI Workflow Operations Automation II	3
INFO 4050G	Global Ethical and Professional Perspectives in IS and IT	3
INFO 4500	Applied AI Capstone Project	3
MKTG 3700	Fundamentals of Product Management	3
AI Elective		3
Credit Hours		15
Total Credit Hours		120

Program Learning Outcomes

1. Identify the fundamental components of artificial intelligence technique and technologies.
2. Analyze data sets employing supervised and unsupervised learning methods.
3. Implement artificial intelligence systems that address organizational needs.
4. Integrate artificial intelligence solutions with business systems and processes.
5. Align artificial intelligence solutions with business priorities and projects.
6. Deliver artificial intelligence solutions that are operationally effective and ethically responsible.

Computer and information systems managers

- Total Positions 613,500
- Field Growth 17.4%
- Median Salary \$169,510
- Average Openings 54.7

Computer and information research scientists

- Total Positions 36,600
- Field Growth 25.6%
- Median Salary \$145,080
- Average Openings 3.4

Database architects

- Total Positions 61,400
- Field Growth 10.8%
- Median Salary \$134,700
- Average Openings 4.2

Software developers

- Total Positions 1,692,100
- Field Growth 17.9%

- Median Salary\$132,270
- Average Openings125.1

Web and digital interface designers

- Total Positions128,600
- Field Growth7.9%
- Median Salary\$98,540
- Average Openings9.9

Computer occupations, all other

- Total Positions470,900
- Field Growth10.8%
- Median Salary\$104,920
- Average Openings34.8

Computer science teachers, postsecondary

- Total Positions45,000
- Field Growth6.1%
- Median Salary\$96,430
- Average Openings3.7