Informatics, MS

Requirements

The Master of Science program in informatics requires a total of 31 s.h. of graduate credit, including 19 s.h. of core courses and 12 s.h. of coursework in a chosen subprogram: geoinformatics, health informatics, or human-computer interaction. Students must maintain a Graduate College Program grade-point average of at least 3.00.

The MS in informatics requires the following coursework.

Core Courses

All students complete the following core courses.

Programming

Course #	Title	Hours
This course:		
CS:5110/IGPI:5110	Introduction to Informatics	3
One of these:		
CS:3010	Software Engineering Fundamentals in Java	3
CS:3210	Programming Languages and Tools	3
CS:3980	Topics in Computer Science I	3
SEES:3050/ IGPI:3050	Geospatial Programming (required for geoinformatics cognate)	3

Statistics

Course #	Title	Hours
One of these:		
BIOS:4120	Introduction to Biostatistics (required for health informatics cognate)	3
STAT:4143/ PSQF:4143	Introduction to Statistical Methods	3

Data Science

Course #	Title	Hours
One of these:		
BAIS:6480/ IGPI:6480	Knowledge Discovery	3
STAT:4540/ BAIS:4540/ DATA:4540/ IGPI:4540	Statistical Learning	3
An approved course (consult advisor)		3

Databases

Course #	Title	Hours
One of these:		
CS:4400	Database Systems	3
SEES:4580/ IGPI:4581	Introduction to Geographic Databases (required for geoinformatics cognate)	3

Human Factors

Course #	Title	Hours
One of these:		
CS:4500	Research Methods in Human-Computer Interaction	3
CS:4510	Human-Computer Interaction for Computer Science (if student has not taken CS:2520)	3
SEES:3540/ IGPI:3540	Geographic Visualization (required for geoinformatics cognate)	3

Ethics

Course #	Title	Hours
This course:		
CS:5980	Topics in Computer Science III (Responsible Conduct of Research)	1

Subprograms

Students choose one of three subprograms and complete the requirements.

Geoinformatics Subprogram

Course #	Title	Hours
All of these:		
SEES:3500/ IGPI:3500	Introduction to Environmental Remote Sensing	3
SEES:3520/ IGPI:3520	GIS for Environmental Applications	3
SEES:3570	Light Detection and Ranging (LiDAR): Principles and Applications	3
SEES:4150/ GHS:4150/ IGPI:4150	Health and Environment: GIS Applications	3

Health Informatics Subprogram

Course #	Title	Hours
Four of these:		
BIOL:3212/ IGPI:3212	Bioinformatics for Beginners	3
BIOL:4386	Introduction to Scientific Computing for Biologists	3
BIOS:5120/ IGPI:5120/ STAT:5610	Regression Modeling and ANOVA in the Health Sciences	3
BMB:3310/ CBIO:3310/ MMED:3310	Practical Data Science and Bioinformatics (recommended for students with a biology background)	3
BMB:4310/ BME:4310	Computational Biochemistry	3
BME:5335	Computational Bioinformatics	3
CS:4470	Health Data Analytics	3
EPID:4400	Epidemiology I: Principles	3

Human-Computer Interaction Subprogram

Course #	Title	Hours
Three of these:		
PSQF:6243/ STAT:6513	Intermediate Statistical Methods	3
PSY:3060	Sensation and Perception	3
An approved elective (consult director)		3
One of these:		
CS:4500	Research Methods in Human-Computer Interaction (if not taken to satisfy Human Factors requirement)	3
CS:4510	Human-Computer Interaction for Computer Science (if not taken to satisfy Human Factors requirement and if have not taken CS:2520)	3
ISE:6211	Human Factors in Healthcare Systems	3
ISE:6220	Cognitive Engineering	3

For more information about the Master of Science requirements, see the Interdisciplinary Graduate Program in Informatics website.