**General Information section:**

## Minors

**Minors**  
Minors, while not required at the college, can enhance and broaden a student’s educational experience and add value for employment or graduate school. Minors require a minimum of 18 credits and most range from 18-24 credits. Minors are open to students in any major, not just a minor in the school of the student’s major. Most majors have a corresponding minor. At least two courses in the minor must be completed at the college. Students must earn a minimum cumulative grade point average of a 2.00 in their minor.

Minors are also available in the following areas: archaeology, behavioral neuroscience, biological anthropology, cultural anthropology, coaching, cybersecurity, data analytics, digital media production, educational studies, gerontology, international business, international governmental non-governmental studies, italian, jazz studies, linguistic anthropology, medical anthropology, public history, queer studies, rhetoric and writing, and statistical modeling.

NOTE: FOR SOME REASON SOME MINORS HAVE BEEN PLACED IN THE LIST OF MAJORS—this should all be relocated to the MINORS lisings at the end of the list.

Faculty of Arts and Sciences

Undergraduate Degree Programs

Earl Simson, Dean

Joan Dagle, Associate Dean

|  |  |  |
| --- | --- | --- |
| **Major** | **Degree** | **Concentration** |
| Africana Studies (p. ) | B.A. |  |
| Anthropology (p. ) | B.A. |  |
| Art (Studio) (p. ) | B.A. or B.F.A. | Ceramics |
|  | B.A. or B.F.A. | Digital Media |
|  | B.A. or B.F.A. | Graphic Design |
|  | B.A. or B.F.A. | Metalsmithing and Jewelry |
|  | B.A. or B.F.A. | Painting |
|  | B.A. or B.F.A. | Photography |
|  | B.A. or B.F.A. | Printmaking |
|  | B.A. or B.F.A. | Sculpture |
| Art Education (p. )  \* | B.S. |  |
| Art Education (p. )  \* | B.F.A. | Ceramics *(Admission currently suspended.)* |
|  | B.F.A. | Digital Media *(Admission currently suspended.)* |
|  | B.F.A. | Graphic Design *(Admission currently suspended.)* |
|  | B.F.A. | Metalsmithing and Jewelry *(Admission currently suspended.)* |
|  | B.F.A. | Painting *(Admission currently suspended.)* |
|  | B.F.A. | Photography *(Admission currently suspended.)* |
|  | B.F.A. | Printmaking *(Admission currently suspended.)* |
|  | B.F.A. | Sculpture *(Admission currently suspended.)* |
| Art History (p. ) | B.A. |  |
| Biology (p. )  \*\* | B.S. |  |
| Chemical Dependency/Addiction Studies (p. ) | B.S. |  |
| Chemistry (p. )  \*\* | B.A. |  |
|  | B.A. | Environmental Chemistry |
|  | B.S. | Biochemistry |
|  | B.S. | Environmental Chemistry |
|  | B.S. | Professional Chemistry |
| Communication (p. ) | B.A. | Journalism |
|  | B.A. | Media Communication |
|  | B.A. | Public and Professional Communication |
|  | B.A. | Public Relations and Advertising |
|  | B.A. | Speech, Language, and Hearing Science |
| Computer Information Systems | B.S. |  |
| Computer Science | B.A. |  |
| Computer Science | B.S. |  |
| Dance Performance (p. ) | B.A. |  |
| Data Science | B.S. |  |
| English (p. )  \*\* | B.A. |  |
|  | B.A. | Creative Writing |
|  | B.A. | Professional Writing |
| Environmental Studies (p. ) | B.A. |  |
| Film Studies (p. ) | B.A. |  |
| Gender and Women’s Studies (p. ) | B.A. |  |
| Geography (p. ) | B.A. |  |
| Global Studies (p. ) | B.A. |  |
| Health Sciences (p. )  ……… | B.S. |  |
| Theatre (p. ) | B.A. | Design/Technical |
|  | B.A. | General Theatre |
|  | B.A. | Musical Theatre |
|  | B.A. | Performance |

\*Art education and music education are designed for students seeking grades pre-K–12 teaching certification.

\*\*Students seeking grades 7–12 teaching certification in these majors should see Secondary Education.

Minors

Africana Studies (p. )

Anthropology (p. )—Archaeology, Biological, Cultural, Linguistic, Medical

Archaeology (p. )

Art (p. )—Ceramics, Digital Media, Graphic Design, Metalsmithing and Jewelry, Painting, Photography, Printmaking, Sculpture

Art History (p. )

Behavioral Neuroscience (p. )

Biological Anthropology (p. )

Biology (p. )

Chemistry (p. )

Communication (p. )

Computer Information Systems (p.)

Computer Science (p. )

Creative Writing (p. )

Cyber Security (p. )

Cultural Anthropology (p. )

Dance Performance (p. )

Data Analytics (p. )

Digital Media Production (p. )

English (p. )

Environmental Studies (p. )

Film Studies (p. )

Francophone Studies (p. )

French (p. )

Gender and Women’s Studies (p. )

Geography (p. )

Gerontology (p. )

Global Studies (p. )

Health Sciences (p. )

History (p. )

International Nongovernmental Organizations Studies (p. )

Italian (p. )

Jazz Studies (p. )

Justice Studies (p. )

Latin American Studies (p. )

Linguistic Anthropology (p. )

Mathematics (p. )

Medical Anthropology (p. )

Music (p. )

Philosophy (p. )

Physics (p. )

Political Science (p. )

Portuguese (p. )

Professional Writing (p. )

(p. )Psychology (p. )

Public History (p. )

Queer Studies (p. )

Rhetoric and Writing

Sociology (p. )

Spanish (p. )

Statistical Modeling (p. )

Theatre (p. )

# Computer Information Systems

**Department of Computer Science and Information Systems**

**Department Chair:** Lisa Bain

**Computer Information Systems Program Faculty: Professor**Bain**; Associate Professor** Hayden**; Assistant Professor** Perry

Computer Information Systems B.S.

Students must consult with their assigned advisor before they will be able to register for courses.

Course Requirements

Courses

|  |  |  |  |
| --- | --- | --- | --- |
| ACCT 201 | Principles of Accounting I: Financial | 3 | F, Sp, Su |
| ACCT 202 | Principles of Accounting II: Managerial | 3 | F, Sp, Su |
| CIS 252 | Introduction to Information Systems | 4 | F, Sp, Su |
| CIS 301 | Introduction to Computer Programming in Business | 4 | F, Sp |
| CIS 421 | Networks and Infrastructure | 4 | F, Sp |
| CIS 440 | Issues in Computer Security | 4 | F, Sp |
| CIS 455 | Database Programming | 4 | F, Sp |
| CIS 462W | Applied Software Development Project | 4 | F, Sp |
| ECON 214 | Principles of Microeconomics | 3 | F, Sp, Su |
| ECON 215 | Principles of Macroeconomics | 3 | F, Sp, Su |
| FIN 301 | Financial Management | 4 | F, Sp, Su |
| MGT 201W | Foundations of Management | 4 | F, Sp, Su |
| MKT 201W | Introduction to Marketing | 4 | F, Sp, Su |

TWO ADDITIONAL COURSES in computer information systems or computer science at the 300-level or above or COMM 230 (for a total of 8 credits):

|  |  |  |  |
| --- | --- | --- | --- |
| COMM 230 | Interpersonal Communication | 4 | F |

COGNATES

|  |  |  |  |
| --- | --- | --- | --- |
| ENGL 230 | Writing for Professional Settings | 4 | F, Sp, Su |
| MATH 177 | Quantitative Business Analysis I | 4 | F, Sp, Su |
| MATH 248 | Business Statistics I | 4 | F, Sp, Su |

Note: MATH 177: Fulfills the Mathematics category of General Education.

Note: MATH 248: Fulfills the Advanced Quantitative Scientific Reasoning category of General Education.

Total Credit Hours: 68

Computer Information Systems Minor

Students must consult with their assigned advisor before they will be able to register for courses.

Course Requirements

A minor in computer information systems consists of a minimum of 20 credit hours (five courses), as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| CIS 252 | Introduction to Information Systems | 4 | F, Sp, Su |
| CIS 440 | Issues in Computer Security | 4 | F, Sp |
| CIS 455 | Database Programming | 4 | F, Sp |

AND TWO ADDITIONAL courses from Computer Information Systems at the 300-level or above.

Total Credit Hours: 20



Data ANALYTICS Minor

Course Requirements

A minor in data analytics consists of a minimum of 24 credit hours (six courses), as follows:

Courses

|  |  |  |  |
| --- | --- | --- | --- |
| MATH 177 | Quantitative Business Analysis I | 4 | F, Sp, Su |
|  | -Or- |  |  |
| MATH 212 | Calculus I | 4 | F, Sp, Su |
|  |  |  |  |
| MATH 240 | Statistical Methods I | 4 | F, Sp, Su |
|  | -Or- |  |  |
| MATH 248 | Business Statistics I | 4 | F, Sp, Su |
|  |  |  |  |
| CIS 252 | Introduction to Information Systems | 4 | F, Sp, Su |
|  |  |  |  |
| CIS 301 | Introduction to Computer Programming in Business | 4 | F, Sp |
|  | -Or- |  |  |
| CSCI 157 | Introduction to Algorithmic Thinking in Python | 4 | F, Sp |
|  |  |  |  |
| CIS 470 | Introduction to Data Analytics | 4 | F |
| CIS 472 | Data Visualization | 4 | As needed |

Total Credit Hours: 24

# Mathematical Sciences

**Department of Mathematical Science**

**Department Chair:**Rebecca Sparks

**Data Science Program Faculty:** Professors Abrahamson, Costa, Humphreys, La Ferla, Sparks, Teixeira, Zhou; Associate Professors Burke, Christy, Gall, Harrop, Kovac, Pinheiro, ; Assistant Professors  Medwid, Turki, Wang

Students **must** consult with their assigned advisor before they will be able to register for courses. 

*Note: Students cannot count toward the major more than two courses with grades below C-.*

Data Science B.S.

Course Requirements

Courses

|  |  |  |  |
| --- | --- | --- | --- |
| MATH 212 | Calculus I | 4 | F, Sp, Su |
| MATH 213 | Calculus II | 4 | F, Sp, Su |
| MATH 240 | Statistical Methods I | 4 | F, Sp, Su |
| MATH 245 | Principles of Data Science | 4 | F, Sp |
| MATH 314 | Calculus III | 4 | F, Sp |
| Math 345 | Linear Models for Data Science | 4 | F |
| MATH 436 | Discrete Mathematics | 3 | F, Sp |
| MATH 441 | Introduction to Probability | 4 | F |
| MATH 445 | Advanced Statistical Methods | 4 | Sp |
| CSCI 157 | Introduction to Algorithmic Thinking in Python | 4 | F, Sp |
| CSCI 428 | Machine Learning | 4 | Sp |
|  |  |  |  |
| CIS 455 | Database Programming | 4 | F, Sp |
|  | -Or- |  |  |
| CSCI 455 | Introduction to Database Systems | 3 | F |
|  |  |  |  |
|  |  |  |  |
| CIS 470 | Introduction to Data Analytics | 4 | F |
| CIS 472 | Data Visualization | 4 | As needed |
| ENGL 230 | Writing for Professional Settings | 4 | F, Sp, Su |
| PHIL 207 | Technology and the Future of Humanity | 3 | F, Sp |

Subtotal: 65-66

Mathematics B.A.

**Department of Mathematical Sciences**

**Department Chair:** Rebecca Sparks

**Mathematics Program Faculty: Professors** Abrahamson, Costa, Humphreys, La Ferla, Sparks, Teixeira, Zhou; **Associate Professors** Burke, Christy, Gall, Harrop, Kovac, Pinheiro, ; **Assistant Professors** Medwid, Turki, Wang

Students **must** consult with their assigned advisor before they will be able to register for courses.

*Note: Students cannot count toward the major more than two courses with grades below C-.*

Course Requirements

Courses

Prior to enrolling in any mathematics course above 120, all students must have completed the College Mathematics Competency.

|  |  |  |  |
| --- | --- | --- | --- |
| MATH 212 | Calculus I | 4 | F, Sp, Su |
| MATH 213 | Calculus II | 4 | F, Sp, Su |
| MATH 300W | Bridge to Advanced Mathematics | 4 | Sp |
| MATH 314 | Calculus III | 4 | F, Sp |
| MATH 315 | Linear Algebra | 4 | F |
| MATH 411 | Calculus IV | 4 | F (odd years) |
| MATH 416 | Ordinary Differential Equations | 4 | Sp (as needed) |
|  | -Or- |  |  |
| MATH 417 | Introduction to Numerical Analysis | 4 | Sp (as needed) |
| MATH 432 | Introduction to Abstract Algebra | 4 | Sp |
| MATH 441 | Introduction to Probability | 4 | F |
| MATH 461W | Seminar in Mathematics | 3 | Sp |

TWO COURSES from

|  |  |  |  |
| --- | --- | --- | --- |
| MATH 416 | Ordinary Differential Equations | 4 | Sp (as needed) |
|  | -Or- |  |  |
| MATH 417 | Introduction to Numerical Analysis | 4 | Sp (as needed) |
| MATH 418 | Introduction to Operations Research | 3 | Sp (even years) |
| MATH 431 | Number Theory | 3 | F, Sp |
| MATH 436 | Discrete Mathematics | 3 | F, Sp |
| MATH 445 | Advanced Statistical Methods | 4 | Sp |

Cognates

CHOOSE Category A or B

ONE COURSE from

**Category A**

|  |  |  |  |
| --- | --- | --- | --- |
| CHEM 405 | Physical Chemistry I | 3 | F |
| CSCI 312 | Computer Organization and Architecture I | 4 | F, Sp |
| CSCI 422 | Introduction to Computation Theory | 4 | Sp (As needed) |
| CSCI 423 | Analysis of Algorithms | 4 | F (odd years), Sp |
| ECON 314 | Intermediate Microeconomic Theory and Applications | 4 | F |
| ECON 315 | Intermediate Macroeconomic Theory and Analysis | 4 | Sp |

Course Descriptions:

CIS 467 - Directed Internship (4)

Students are assigned to a business, an industrial organization, or a not-for-profit organization and supervised by a mentor. Students receive 1 credit hour for every four hours of work. A two-hour biweekly seminar is included. Graded S, U.

Prerequisite: Major in computer information systems and completion of at least 60 college credits.

Offered: Fall, Spring, Summer.

CIS 470 - Introduction to Data Analytics (4)

Domain knowledge in mathematics, statistics, machine learning and databases that pertains to specific data and information extraction are introduced. Students use these tools to solve unstructured problems.

Prerequisite: CIS 252 or CIS 352, CIS 301 or CSCI 157 and MATH 248 or MATH 240, or consent of department chair

Offered: Fall.

CIS 472 - Data Visualization (4)

This course introduces algorithms and techniques for effective data visualizations based on data science principles, graphic and communication design, visual art, perceptual and cognitive science. Data visualization tools are introduced.

Prerequisite: CIS 252 or CIS 352, CIS 301 or CSCI 157 and MATH 248 or MATH 240, or consent of department chair.

Offered: As needed.

CIS 490 - Directed Study (4)

Designed to be a substitute for a traditional course under the instruction of a faculty member.

Prerequisite: Consent of instructor, department chair and dean.

Offered: As needed.