# INFORMATION SYSTEMS, BACHELOR OF SCIENCE (BS)

## Program Learning Outcomes

- **Communication and Interpersonal Skills:** Use written, oral and electronic methods for effective communication. (UO 1) The student will be able to:
  - Participate effectively on teams to accomplish a common goal.
  - Communicate effectively with a range of audiences using various mechanisms, formally or informally with excellent oral, written, and listening skills.
  - Analyze, and incorporate diverse ideas and broader perspectives represented in the diversity of people.
  - Demonstrate persistence, flexibility, curiosity, creativity, risk taking, and a tolerance of these abilities in others.
  - Devise effective user interfaces for information systems.
- **Ethical and Professional Responsibilities:** Discern and articulate the impact of technologies on society. (UO 8) The student will be able to:
  - Understand professional responsibilities in terms of the ethical, legal, security and social aspects of any given problem and its solution.
  - Demonstrate an understanding of the cognitive, social, legal, ethical, diversity, and security perspectives surrounding a given problem.
  - Assess the impact of information systems and associated technologies on individuals, groups, organizations, society, and the world for the purpose of making informed decisions from a sociological, governmental, legal, and/or security perspective.
  - Critically evaluate and possibly act on current ethical issues in the IS field.
  - Apply IS professional codes of conduct.
- **Information Technology:** Have proficient use of computers and software to manage information statistical analysis, spreadsheet, database and other appropriate applications. (UO 10)
  - Understand, apply and adapt various problem-solving strategies, using appropriate technology and methods.
  - Identify information systems problems and/or opportunities in terms of the human, organizational, informational and technology dimensions.
  - Analyze issues surrounding the problem and/or opportunity in terms of the human, organizational, informational, and technology dimensions; and determine the requirements appropriate to understanding the situation.
  - Design systems, architectures, processes, components, or programs to meet desired needs of the human context at varying levels of analysis (e.g., individual, group, organization, society, and/or world).
  - Evaluate the success of systems, architecture, processes, components, or programs intended to meet desired needs of the human context at varying levels of analysis (e.g., individual, group, organization, society, and/or world).
- **Professional Proficiency:** Evaluate the necessary skills and knowledge to meet professional competencies as information systems professionals and global citizens. (UO 5 & 9) The student will be able to:
  - Define the history and vocabulary unique to information systems professionals.
  - Understand and apply the interdisciplinary, theoretical knowledge of information systems.
  - Define and explain the core concepts, principles, processes, and theories within the academic major of IS.
  - Apply the core concepts of the academic majors of IS to real-world problems.
  - Collaborate with other professionals as well as perform successfully at the individual level.

## Related Links

Information Systems, BS Program Page (https://www.sru.edu/academics/majors-and-minors/information-systems/)

Information Systems Fact Sheet (https://www.sru.edu/documents/programs/factsheets/undergraduate/FS-InfoSystems.pdf)

Professional Licensure/Certification Page (https://www.sru.edu/students/student-consumer-information/professional-licensures/)

## Curriculum Guide

### GPA Requirement

Overall GPA: 2.0 or higher
Core GPA: 2.0 or higher

### Summary*

| Code | Title | Hours |
| --- | --- | --- |
| Rock Studies 2 Requirements | | 42-43 |
| Other Basic Requirements | | 0-3 |
| Major Requirements | | 54-55 |
| Electives | | 24 |

* All undergraduate degree programs require a minimum of 120 credits. Some courses meet multiple requirements, but are only counted once toward the 120 credit total required to graduate.

### Rock Studies 2 Requirements

| Code | Title | Hours |
| --- | --- | --- |
| **The Rock** | | |
| SUBJ 139 | Foundations of Academic Discovery [1] | 3 |
| ENGL 102 | Critical Writing | 3 |
| ENGL 104 | Critical Reading | 3 |
| Select one of the following: | | 3-4 |
| MATH 117 | Quantitative Reasoning | |
| MATH 123 | Introduction to Applied Calculus | |
| MATH 225 | Calculus I | |
| Select one of the following: | | 3 |
| COMM 200 | Civil Discourse: Theory & Practice | |
| PHIL 110 | Ethics and Civil Discourse | |
| POLS 235 | Civil Discourse and Democracy | |
| Subtotal | | 15-16 |
| **Integrated Inquiry** | | |
| *Creative and Aesthetic Inquiry* | | |
| Select 3 Credits (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/) | | 3 |

| | | |
|---|---|---|
| *Humanities Inquiry* | | |
| Select 3 Credits (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/) | | 3 |
| *Social Science Inquiry* | | |
| Select 3 Credits (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/) | | 3 |
| *Natural Sciences Inquiry* | | |
| SCI 101 | Science of Life | 3 |
| *Physical Sciences Inquiry* | | |
| SCI 102 | Understanding the Physical World | 3 |
| Subtotal | | 15 |
| **Thematic Thread** | | |
| Select 12 Credits (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/) [2] | | 12 |
| Required Thematic Thread Coursework: | | |
| ECON 202 | Principles of Microeconomics | |
| **Total Hours** | | **42-43** |

[1]  Course offered in multiple subjects; cannot take course in first major subject.

[2]  One course from each category; six credits must be 300-level or above; no more than 4 credits from one subject area; specific courses required in first major, regardless of prefix of course, cannot be used to satisfy thread requirements; any course with same prefix as first major cannot be used to satisfy thread requirements, even if it is not a course in the first major.

## Basic Math Requirement

Check with your adviser or a current degree audit report to see if you have been exempted from this course. The credit earned in this course will not be counted toward the 120 credit hour minimum needed to earn a degree.

| Code | Title | Hours |
|---|---|---|
| Complete one of the following: | | 0-3 |
| Meet required minimum SAT or ACT math score OR | | |
| ESAP 110 | Beginning Algebra | |
| **Total Hours** | | **0-3** |

## DIVERSITY,  EQUITY,  AND INCLUSION REQUIREMENT

Students must take and pass a course with the Diversity, Equity, and Inclusion (DEI) designation prior to graduation.  Students can meet this requirement by taking any DEI - designated course in any program at any time during their undergraduate career.

## Major Requirements

- 27 major credits must be taken at SRU or PASSHE
- 27 major credits must be taken at the 300 level or above

| Code | Title | Hours |
|---|---|---|
| **Required Management Information System Courses** | | |
| MIS 210 | Productivity Software [1] | 3 |
| Select one of the following: | | 3 |
| MIS 211 | Information Systems Application Development [1] | |
| CPSC 130 | Introduction to Computing and Programming [1] | |

| Code | Title | Hours |
|---|---|---|
| CPSC 146 | Programming Principles [1] | |
| MIS 300 | Challenges of Computer Technology [1] | 3 |
| MIS 301 | Practical Computer Security [1] | 3 |
| MIS 323 | Data Base Systems [1] | 3 |
| MIS 353 | Business Data Communications and Technologies [1] | 3 |
| MIS 413 | Systems Analysis [1] | 3 |
| MIS 443 | Project Management [1] | 3 |
| MIS 453 | Fundamentals of Enterprise Architecture [1] | 3 |
| Subtotal | | 27 |
| **Required Math Courses** | | |
| ECON 219 | Business Analytics I [2] | 3 |
| or MGMT 219 | Business Analytics I | |
| Subtotal | | 3 |
| **Required Business Environment Courses** | | |
| ACCT 209 | Financial Accounting [1] | 3 |
| ECON 201 | Principles of Macroeconomics [1] | 3 |
| or ECON 202 | Principles of Microeconomics | |
| MGMT 320 | Operations Management [1] | 3 |
| MGMT 351 | Organizational Behavior [1] | 3 |
| MIS 265 | Management Information Systems [1] | 3 |
| Subtotal | | 15 |
| **Electives** | | |
| Select one of the following seven areas below: | | 9-10 |
| Business (p. 2) | | |
| Geographic Information Systems (GIS) (p. 3) | | |
| Health Care Administration Management (p. 3) | | |
| Programming (p. 3) | | |
| Safety (p. 3) | | |
| Security (p. 3) | | |
| Web Technology (p.          ) | | |
| Digital Media (p. 3) | | |
| Big Data (p. 3) | | |
| Subtotal | | 9-10 |
| **Total Hours** | | **54-55** |

[1]  Course counts for 50% of Major and Major GPA

[2]  Course counts for 50% of Major and not for Major GPA

*  Some courses may require pre-requisites. Please see course descriptions to determine if there are any pre-requisites for that specific course.

## Business

| Code | Title | Hours |
|---|---|---|
| Select one of the following: | | 3 |
| MRKT 338 | E-Commerce [1] | |
| or MGMT 352 | Supply Chain Management | |
| Upper division [2] | | 3 |
| Select one of the following: | | 3 |
| Upper division [2] | | |
| MIS 450 | Internship [1] | |
| **Total Hours** | | **9** |

[1] Course counts for 50% of Major and Major GPA
[2] Any upper division course from BSBA discipline.

## Geographic Information Systems (GIS)

| Code | Title | Hours |
|------|-------|-------|
| GES 115 | Introduction to Geospatial Technologies [1] | 3 |
| GES 325 | Introduction to Geographic Information Science [1] | 3 |
| GES 315 | Cartography I [1] | 3 |
| Select one of the following: | | 3 |
| GES 410 | Remote Sensing [1] | |
| GES 425 | Advanced Geographic Information Systems [1] | |
| GES 450 | Internship [1] | |
| **Total Hours** | | **12** |

[1] Course counts for 50% of Major and Major GPA

## Health Care Administration Management

| Code | Title | Hours |
|------|-------|-------|
| HCAM 230 | US Healthcare Systems [1] | 3 |
| MIS 403 | Introduction to Healthcare Information Systems [1] | 3 |
| Select one of the following: | | 3 |
| HCAM 300/400 level | Any upper division HCAM course [1,2] | |
| MIS 450 | Internship [1] | |
| or HCAM 450 | Internship-Health Care Administration & Management | |
| **Total Hours** | | **9** |

[1] Course counts for 50% of Major and Major GPA
[2] Except HCAM 360

## Programming

| Code | Title | Hours |
|------|-------|-------|
| CPSC 246 | Advanced Programming Principles [1] | 3 |
| CPSC 374 | Algorithms and Data Structures [1] | 3 |
| Select one of the following: | | 3 |
| CPSC 300/400 level | Any upper division CPSC course not used above [1] | |
| MIS 450 | Internship [1] | |
| **Total Hours** | | **9** |

[1] Course counts for 50% of Major and Major GPA

## Safety

| Code | Title | Hours |
|------|-------|-------|
| SAFE 118 | Introduction to Safety [1] | 3 |
| SAFE 418 | Security in the Workplace [1] | 3 |
| Select one of the following: | | 3 |
| MGMT 354 | Human Resources Management [1] | |

| Code | Title | Hours |
|------|-------|-------|
| or MIS 450 | Internship | |
| **Total Hours** | | **9** |

[1] Course counts for 50% of Major and Major GPA

## Security

| Code | Title | Hours |
|------|-------|-------|
| CSS 120 | Introduction to Private Security [1] | 3 |
| MIS 333 | Introduction to Computer Forensics [1] | 3 |
| MIS 401 | Information Systems Security [1] | 3 |
| or MIS 450 | Internship | |
| **Total Hours** | | **9** |

[1] Course counts for 50% of Major and Major GPA

## Web Technologies

| Code | Title | Hours |
|------|-------|-------|
| CPSC 217 | Advanced Web Programming [1] | 3 |
| CPSC 337 | Introduction to Web Graphics [1] | 3 |
| Select one of the following: | | 3 |
| CPSC 317 | Server-Side Scripting [1] | |
| MRKT 338 | E-Commerce [1] | |
| MIS 450 | Internship [1] | |
| **Total Hours** | | **9** |

[1] Course counts for 50% of Major and Major GPA

## Digital Media

| Code | Title | Hours |
|------|-------|-------|
| Select three of the following: | | 9 |
| COMM 248 | Interactive Multimedia 1 | |
| COMM 258 | Interactive Multimedia 2 | |
| COMM 307 | Social Media | |
| MIS 450 | Internship | |
| **Total Hours** | | **9** |

## Big Data

| Code | Title | Hours |
|------|-------|-------|
| Select three of the following: | | 9 |
| MIS 328 | Exploring Big Data for Business I | |
| MIS 423 | Advanced Business Database Systems | |
| MIS 428 | Exploring Big Data for Business II | |
| **Total Hours** | | **9** |

## Co-curricular and Experiential Learning

Students are encouraged to explore additional curricular and co-curricular opportunities. There is a strong correlation between long-term student success and participation in the following types of programs and activities:

1. International study programs (short-term, semester, and year-long)
2. High-Impact Practice (HIP) designated classes
3. Student-faculty research
4. Student leadership development

5. Service-learning classes
6. Career education and development
7. Internships
8. Volunteering in healthcare industry related settings
9. Job Shadowing

## Important Curriculum Guide Notes

This Curriculum Guide is provided to help SRU students and prospective students better understand their intended major curriculum. Enrolled SRU students should note that the My Rock Audit may place already-earned and/or in progress courses in different, yet valid, curriculum categories. Enrolled SRU students should use the My Rock Audit Report and materials and information provided by their faculty advisers to ensure accurate progress towards degree completion. *The information on this guide is current as of the date listed. Students are responsible for curriculum requirements at the time of enrollment at the University.*

PASSHE - Pennsylvania State System of Higher Education Institutions

INFORMATION SYSTEMS - BS (2240)
This program is effective as of Summer 2023
Revised 04.11.2023
UCC 01.31.2023

## Recommended Four-Year Plan

| Course | Title | Hours |
|---|---|---|
| **First Year** | | |
| **Fall** | | |
| MIS 210 | Productivity Software | 3 |
| ENGL 102 | Critical Writing | 3 |
| ESAP 101 | FYRST Seminar [*] | 1 |
| SUBJ 139 | Foundations of Academic Discovery [1] | 3 |
| Rock Studies 2 Requirements (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/) | | 3 |
| Rock Studies 2 Requirements (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/) | | 3 |
| | **Hours** | **16** |
| **Spring** | | |
| ENGL 104 | Critical Reading | 3 |
| ECON 219 or MGMT 219 | Business Analytics I or Business Analytics I | 3 |
| MIS 265 | Management Information Systems | 3 |
| Rock Studies 2 Requirements (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/) | | 3 |
| Rock Studies 2 Requirements (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/) | | 3 |
| | **Hours** | **15** |
| **Second Year** | | |
| **Fall** | | |
| ACCT 209 | Financial Accounting | 3 |
| Select one of the following: | | 3 |
| MIS 211 | Information Systems Application Development | |
| CPSC 130 | Introduction to Computing and Programming | |
| CPSC 146 | Programming Principles | |

| Course | Title | Hours |
|---|---|---|
| Select one of the following: | | 3 |
| COMM 200 | Civil Discourse: Theory & Practice | |
| PHIL 110 | Ethics and Civil Discourse | |
| POLS 235 | Civil Discourse and Democracy | |
| Rock Studies 2 Requirements (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/) | | 3 |
| Rock Studies 2 Requirements (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/) | | 3 |
| | **Hours** | **15** |
| **Spring** | | |
| MGMT 351 | Organizational Behavior | 3 |
| MIS 323 | Data Base Systems | 3 |
| ECON 201 or ECON 202 | Principles of Macroeconomics or Principles of Microeconomics | 3 |
| Rock Studies 2 Requirements (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/) | | 3 |
| Rock Studies 2 Requirements (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/) | | 3 |
| | **Hours** | **15** |
| **Third Year** | | |
| **Fall** | | |
| MIS 300 | Challenges of Computer Technology | 3 |
| MIS 301 | Practical Computer Security | 3 |
| MGMT 320 | Operations Management | 3 |
| MIS 323 | Data Base Systems (or free elective) | 3 |
| Elective | | 3 |
| | **Hours** | **15** |
| **Spring** | | |
| MIS 353 | Business Data Communications and Technologies | 3 |
| MGMT 351 | Organizational Behavior | 3 |
| Information Systems Elective | | 3 |
| Elective | | 3 |
| Elective | | 3 |
| | **Hours** | **15** |
| **Fourth Year** | | |
| **Fall** | | |
| MIS 413 | Systems Analysis | 3 |
| Rock Studies 2 Requirements (https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/) | | 3 |
| Information Systems Elective | | 3 |
| Elective | | 3 |
| Elective | | 3 |
| | **Hours** | **15** |
| **Spring** | | |
| MIS 443 | Project Management | 3 |
| MIS 453 | Fundamentals of Enterprise Architecture | 3 |
| Information Systems Elective | | 3 |
| Elective | | 3 |
| Elective | | 3 |
| | **Hours** | **15** |
| | **Total Hours**** | **121** |

[1] Course offered in multiple subjects; cannot take course in first major subject.

* Students are encouraged to take ESAP 101 as a Free Elective.

*\*\* This document is meant to serve as a guide. Some planners may show more than 120 credits because faculty have created flexibility in choosing courses.  However, only 120 credits are required to obtain a degree. Please consult with your academic adviser and refer to your curriculum guide prior to registering for courses. This plan should be reviewed, and verified, by you and your academic adviser at least once each academic year.*

Major Code: 2240
Revised: 05.24.2023