Luddy School of Informatics, Computing, and Engineering
Bulletin 2022-2023

INDIANA UNIVERSITY

Undergraduate Programs

Degree Programs

BS in Informatics

Luddy Degree and Major Requirements

** Equivalent honors versions of regular courses may substitute for all requirements. Please see specific course descriptions, posted in respective bulletin, for prerequisites and other pertinent information. **

The Luddy School of Informatics, Computing, and Engineering student database (SAMS) enables students to check their academic degree information, add/drop minors, add/change specializations/cognates/concentrations and apply to graduate. Students are responsible for these actions.

Luddy Degree Requirements

Diversity in the United States (3 cr.)

This is a General Education shared goal required by all schools. Luddy students must check the listings for courses at CASE requirements for the College of Arts and Sciences. The course must be taken through the Indiana University

Bloomington campus or an IU administered or IU co-sponsored Overseas Study program.

Intensive Writing (3 cr.)

One intensive writing course at the 200 level or above, with a minimum grade of C, after completing the English composition requirement. Intensive writing courses at IUB are defined by the College of Arts and Sciences. Students must check the listings for courses at CASE requirements for the College of Arts and Sciences.

Intensive Writing credit will not be awarded for transfer courses and will not be awarded for written work in courses that are not listed as Intensive Writing unless special arrangements have been completed and approved prior to the relevant deadline. All special arrangements must be approved by the director of undergraduate studies in the respective division. The deadline for submitting a proposal to satisfy Intensive Writing by special arrangement is the end of the 2nd week of classes (for regular semester-length courses) and the end of the first week of classes for a summer session course.

Statistics (3 cr.)

This course may not double count in the Natural and Mathematical Sciences requirement.

Select one of the following Statistics courses:

- ANTH-A 306 Anthropological Statistics
- CJUS-K 300 Techniques of Data Analysis
- ECON-E 370 Statistical Analysis for Business and Economics
- MATH-M 365 Introduction to Probability and Statistics
- POLS-Y 395 Quantitative Political Analysis
- PSY-K 300 Statistical Techniques
- PSY-K 310 Statistical Techniques
- SOC-S 371 Statistics in Sociology
- SPEA-K 300 Statistical Techniques
- SPH-Q 381 Introduction to Biostatistics
- STAT-K 310 Statistical Techniques
- STAT-S 300 Introduction to Applied Statistical Methods
- STAT-S 301 Applied Statistical Methods for Business
- STAT-S 350 Introduction to Statistical Inference

Ethics (3 cr.)

This course may not double count in the Arts and Humanities requirement.

Select one ethics course from the following.

- INFO-I 453 Computer and Information Ethics
- PHIL-P 141 Introduction to Ethical Theories and Problems
- PHIL-P 242 Applied Ethics
- PHIL-P 340 Classics in Ethics
- PHIL-P 342 Problems of Ethics
- REL-R 170 Religion, Ethics, and Public Life

Arts and Humanities (6 Cr.)

Courses may not double count between this requirement, ethics, major, or cognate.

These courses may overlap with the Common Ground A&H. Course lists located at CASE requirements for the College of Arts and Sciences OR in the General Education bulletin.

Natural and Mathematical Sciences (3 cr.)

Courses may not double count between this requirement, math and statistics, major, or cognate.

One 3 hour course plus one 5 hour course OR three 3 hour courses of N&M, excluding INFO-I 101. **These courses may overlap with the Common Ground N&M**. Course lists located at CASE requirements for the College of Arts and Sciences OR in the General Education bulletin.

General Electives

Remaining credit hours may be used to fulfill minors or pursue personal interests. Students may obtain a maximum of three minors. A maximum of 4 combined HPER-E, SPH-I, SPH-O, and SPH-W credit hours and 10 MUS-X credit hours below the 100 level may be used in total hours.

Major Requirements

A major GPA of at least 2.000 for all courses taken in the major is required (all major course attempt grades are included).

A minimum grade of C- or higher (unless otherwise noted) is required for a course to fulfill a requirement in the major.

12 hours in the major must be completed on the Bloomington campus.

Required Informatics Core Courses

- INFO-I 101 Introduction to Informatics (must complete with a minimum grade of C)
- INFO-I 201 Mathematical Foundations of Informatics
- INFO-I 202 Social Informatics OR INFO-I 222 The Information Society
- INFO-I 210 Information Infrastructure I
- INFO-I 211 Information Infrastructure II
- INFO-I 300 Human-Computer Interaction Design and Programming - **Must be completed on the Indiana University Bloomington campus**
- INFO-I 308 Information Representation - **Must be completed on the Indiana University Bloomington campus**
- INFO-Y 395 Career Development for Informatics Majors **- Must be completed on the Indiana University Bloomington campus**

Advanced Informatics Courses

Advanced informatics courses may not double count as elective courses.

Select 6 credit hours from the following:

* If pursuing a Computer Science Cognate, five courses must be completed if substituting CSCI-C 211/C 212 for INFO-I 210/I 211 and CSCI-C 241 for INFO-I 201 in the major (one additional course for each CSCI course used in the major).

- INFO-I 301 Presentations for IT Professionals
- INFO-I 303 Organizational Informatics
- INFO-I 304 Introduction to Virtual Reality
- INFO-I 310 Multimedia Arts and Technology
- INFO-I 311 Application Development
- INFO-I 320 Distributed Systems and Collaborative Computing
- INFO-I 330 Legal and Social Informatics of Security
- INFO-I 341 Prototyping for Arduino Tools
- INFO-I 342 Mobile Programming
- INFO-I 345 Interaction Design Research
- INFO-I 346 Prototyping and Evaluation

- INFO-I 356 Globalization, Where We Fit In

- INFO-I 360 Web Design

- INFO-I 363 Visual Design for the Web

- INFO-I 365 JavaScript

- INFO-I 368 Introduction to Network Science

- INFO-I 369 Performance Analytics

- INFO-I 370 Methods for HCC

- INFO-I 390 Undergraduate Independent Study

- INFO-I 399 Current Topics in Informatics

- INFO-I 400 Topics in Informatics

- INFO-I 403 Mobile Human Computer Interaction and Design

- INFO-I 407 Introduction to Health Informatics

- INFO-I 411 Animal-Computer Interaction Methods

- INFO-I 412 Direct Observation and Design

- INFO-I 413 Usable Artificial Intelligence

- INFO-I 414 Seminar in Animal-Computer Interaction

- INFO-I 421 Applications of Data Mining

- INFO-I 422 Data Visualization

- INFO-I 423 Big Data Applications and Analytics

- INFO-I 424 Big Data Software and Projects

- INFO-I 426 Informatics in Disasters and Emergency Response

- INFO-I 427 Search Informatics

- INFO-I 430 Security for Networked Systems

- INFO-I 433 Systems & Protocol Security & Information Assurance

- INFO-I 435 Management, Access, and Use of Big and Complex Data

- INFO-I 436 Technology Innovation

- INFO-I 437 Design Strategy

- INFO-I 438 Technology Entrepreneurship

- INFO-I 440 Human Robot Interaction

- INFO-I 441 Interaction Design Practice

- INFO-I 442 Creating Virtual Assets

- INFO-I 443 Building Virtual Worlds

- INFO-I 444 Artificial Life in Virtual Reality

- INFO-I 453 Computer and Information Ethics

- INFO-I 468 Advanced Network Science

- INFO-I 469 Collective Intelligence

- INFO-I 485 Bioinspired Computing

- INFO-I 486 Artificial Life

- INFO-I 487 Introduction to Virtual Heritage

- INFO-I 488 Advanced Topics in Virtual Heritage

- INFO-I 499 (3 credit hour course)

- CSCI-B, C or P 300 level course

- CSCI-B, C or P 400 level course

Informatics Electives

Informatics elective courses may not double count as advanced informatics courses.

Courses listed below are subject to the successful completion of prerequisites or approval of the instructor.

Select 6 credit hours from the following:

- INFO-I 301 Presentations for IT Professionals

- INFO-I 303 Organizational Informatics

- INFO-I 304 Introduction to Virtual Reality

- INFO-I 310 Multimedia Arts and Technology

- INFO-I 311 Application Development

- INFO-I 320 Distributed Systems and Collaborative Computing

- INFO-I 330 Legal and Social Informatics of Security

- INFO-I 341 Prototyping for Arduino Tools

- INFO-I 342 Mobile Programming

- INFO-I 345 Interaction Design Research

- INFO-I 346 Prototyping and Evaluation

- INFO-I 356 Globalization, Where We Fit In

- INFO-I 360 Web Design

- INFO-I 363 Visual Design for the Web

- INFO-I 365 JavaScript

- INFO-I 368 Introduction to Network Science

- INFO-I 369 Performance Analytics

- INFO-I 370 Methods for HCC

- INFO-I 390 Undergraduate Independent Study

- INFO-I 399 Current Topics in Informatics

- INFO-I 400 Topics in Informatics

- INFO-I 403 Mobile Human Computer Interaction and Design

- INFO-I 407 Introduction to Health Informatics

- INFO-I 411 Animal-Computer Interaction Methods

- INFO-I 412 Direct Observation and Design

- INFO-I 413 Usable Artificial Intelligence

- INFO-I 414 Seminar in Animal-Computer Interaction

- INFO-I 421 Applications of Data Mining

- INFO-I 422 Data Visualization

- INFO-I 423 Big Data Applications and Analytics

- INFO-I 424 Big Data Software and Projects

- INFO-I 426 Informatics in Disasters and Emergency Response

- INFO-I 427 Search Informatics

- INFO-I 430 Security for Networked Systems

- INFO-I 433 Systems & Protocol Security & Information Assurance

- INFO-I 435 Management, Access, and Use of Big and Complex Data

- INFO-I 436 Technology Innovation

- INFO-I 437 Design Strategy

- INFO-I 438 Technology Entrepreneurship

- INFO-I 440 Human Robot Interaction

- INFO-I 441 Interaction Design Practice

- INFO-I 442 Creating Virtual Assets

- INFO-I 443 Building Virtual Worlds

- INFO-I 444 Artificial Life in Virtual Reality

- INFO-I 453 Computer and Information Ethics

- INFO-I 468 Advanced Network Science

- INFO-I 469 Collective Intelligence

- INFO-I 485 Bioinspired Computing

- INFO-I 486 Artificial Life

- INFO-I 487 Introduction to Virtual Heritage

- INFO-I 488 Advanced Topics in Virtual Heritage

- INFO-I 499 (3 credit hour course)

- BUS-K 303 Technology and Business Analysis

- BUS-S 302 Management Information Systems

- BUS-S 305 Technology Infrastructure

- BUS-S 307 Data Management

- BUS-S 308 Business Application Development

- BUS-S 310 Systems Analysis and Project Management

- BUS-S 433 Information Systems Security

- CJUS-P 300 Topics in Criminal Justice (Topic: Cyber Crime & Digital Evidence)

- COGS-Q 351 Introduction to Artificial Intelligence and Computer Simulation

- CSCI- Any course at the 300 or 400 level (3 credit hour course)

- MSCH-G 300 Game Production I

- MSCH-G 310 Game Design I: Concepts

- MSCH-G 400 Game Production II

- MSCH-G 410 Games Design II: Systems

- MSCH-G 420 Advanced Game Art I

- MSCH-G 430 Game Art II

- MSCH-G 450 Game Workshop I: Prototype

- MSCH-H 300 EPS Communications Law

- MSCH-J 300 Communications Law

- MSCH-J 360 Journalism Specialties (Topic: Esports Journalism)

- MSCH-J 448 Global Journalism: Issues and Research

- MSCH-L 322 Telecommunications Policymaking

- MSCH-L 425 Telecommunications Regulation

- MSCH-M 421 Economics of Communications Industries

- MSCH-P 351 Video Field and Post Production

- MSCH-P 353 Audio Production

- MSCH-P 354 Program Graphics and Animation

- MSCH-P 356 TV Studio Production

- MSCH-P 369 Sound Design

- MSCH-P 433 Video Documentary

- MSCH-P 434 Documentary Production

- MSCH-P 452 Topical Seminar in Design and Production (Topic: Advanced Video Game Design and Production)

- MSCH-P 454 DVD Authoring

- MSCH-T 427 International Telecommunications

- SOAD-S 310 Interactive Media

- SOC-S 339 The Sociology of Media

- SOC-S 377 Digital Society

- SPEA-V 369 Managing Information Technology

Capstone

Select one of the following capstone options for a total of 6 hours:

- INFO-I 494/I 495 Design and Development of an Information System - **Must be completed on the Indiana University Bloomington campus**

- INFO-I 491 Capstone Project Internship - **Must be enrolled through Indiana University Bloomington**

- INFO-I 489 Serve IT Capstone Internship Informatics - **Must be enrolled through Indiana University Bloomington**

- INFO-I 492/I 493 Senior Thesis - **Must be enrolled through Indiana University Bloomington**

Cognate Area Courses

Students should, in consultation with their academic advisor, choose a cognate area before their sophomore year. Students must receive a minimum grade of C- in each course and a cumulative GPA of 2.0 or higher in their cognate area. **Cognate area courses may not double count in any area except the Common Ground General Education requirements .** Please consult the cognate area of this bulletin for the list of cognate areas.

Academic Bulletins

- Indiana University

- IU Bloomington