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

INDIANA UNIVERSITY

Undergraduate Programs

Degree Programs

BS in Computer Science

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 each school. Luddy students much 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 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.

Natural Science (12 cr.)

Select twelve credit hours from the following:

- PSY-P 155 Introduction to Psychological and Brain Sciences
- PSY-P 211 Methods of Experimental Psychology
- COGS-Q 370 Experiments and Models in Cognition
- ASTRONOMY (any course)
- BIOLOGY (any course)
- CHEMISTRY (any course)
- EARTH AND ATMOSPHERIC SCIENCES (any course)
- PHYSICS (any course)

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 is required for a course to fulfill a requirement in the major.

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

Students must complete the following:

Core courses:

- CSCI-C 200 Introduction to Computers and Programming or CSCI-C 211 Introduction to Computer Science
- CSCI-C 212 Introduction to Software Systems
- CSCI-C 241 Discrete Structures for Computer Science
- CSCI-C 343 Data Structures
- CSCI-Y 395 Career Development for Computer Science Majors

One approved specialization (see specializations area in bulletin)

45 hours including Core courses and Specialization with the remaining courses drawn from the following list – at least 26 of the 45 hours must be at the 300 level or above.

- CSCI-A 290 Tools for Computing (maximum of 3 total credit hours)
- CSCI-B, C, H, and P courses numbered 200 and above
- CSCI-Y 390* Undergraduate Independent Study
- CSCI-Y 391* Undergraduate Independent System Development
- CSCI-Y 399* Project in Professional Practice
- CSCI-Y 499* Honors Research
- CSCI-H 498 Honors Seminar (at most 1 hour)
- ENGR-E 101 Innovation and Design (if completed before or concurrently with CSCI-C 212)
- INFO-I 101 Introduction to Informatics (if completed before or concurrently with CSCI-C 212)
- INFO-I 494/INFO-I 495 Design and Development of an Information System - authorization required, please see advisor
- MATH-M 471 Numerical Analysis I
- MATH-M 472 Numerical Analysis II

* Only 6 total hours in these 4 courses

Mathematical Science Requirement:

If used in specialization area (excluding the Security specialization), it may not be used to satisfy this requirement.

- MATH-M 211 Calculus I (or equivalent proficiency)

Select two from the following:

- MATH-M 212 Calculus II
- MATH-M 3XX (all 300 level courses)
- MATH-M 4XX (all 400 level courses)
- MATH-T 336 Topics in Euclidean Geometry
- MATH-T 403 Modern Algebra for Secondary Teachers
- ECON-E 370 Statistical Analysis for Business and Economics
- PHIL-P 251 Intermediate Symbolic Logic
- STAT-S 350 Introduction to Statistical Inference
- STAT-S 352 Data Modeling and Inference

Specialization Area Courses

Students should, in consultation with their academic advisor, choose a specialization area before their junior year. Students must receive a minimum grade of C– in each course. Please consult the specialization section of this bulletin for the list of specialization areas.

Bachelor of Science in Computer Science with Honors

Students must satisfy the requirements for the B.S. in Computer Science degree and the following additional requirements:

- Overall GPA 3.3 or greater
- Computer Science major GPA 3.3 or greater
- Completion of at least 11 hours of CSCI Honors courses (can include CSCI-Y 499).
- At least 29 of the 45 hours required for the major completed at the 300 level or above

Academic Bulletins

- Indiana University
- IU Bloomington