2019-2020 Undergraduate and Graduate Academic Catalog

Computer Science, B.S.

Degree Awarded: Bachelor of Science

Total Credit Hours: 120

Career Opportunities: Cognitive Science – Human factors engineering, human–computer interface design.
Information Science – Business systems design and analysis, networking.
Scientific Computing – Medicine, security, forensics, E–commerce, biology, digital imaging.
Computer Engineering – Semiconductor design, robotics, control systems, operations research.
Video Game Design – Entertainment software industry, simulation, medical imaging.

General Education Core Curriculum

Core Curriculum

Freshman Year

Required Courses

- UNIV 100 – First Year Seminar **3 Credit(s)**
- CMPS 150 – Introduction to Computer Science **3 Credit(s)**
- CMPS 260 – Introduction to Data Structures and Software Design **3 Credit(s)** *
- EECE 140 – Computer Engineering **3 Credit(s)**
- ENGL 101 – Introduction to Academic Writing **3 Credit(s)**
- ENGL 102 – Writing and Research About Culture **3 Credit(s)**
- MATH 270 – Calculus I **4 Credit(s)**
- MATH 301 – Calculus II **4 Credit(s)**

Note:

* On the third grade of "W", "D", "F" in any of these courses, the student will not be permitted to continue pursuing a major in computer science at the University of Louisiana at Lafayette.

Electives

Social/Behavioral Sciences (3 Credits)

Choose from the General Education Core list of Social/Behavioral Science courses. Three hours must be at the 200–level or above.

History (3 Credits)

Choose from the General Education Core list of History courses.

Total: 32 Credits

Sophomore Year

Required Courses

- CMPS 261 – Advanced Data Structures and Software Engineering **3 Credit(s)** *
- CMPS 310 – Computers in Society **2 Credit(s)**
- CMPS 340 – Design and Analysis of Algorithms **3 Credit(s)**
- CMPS 341 – Foundations of Computer Science **3 Credit(s)**
- CMPS 351 – Computer Organization and Assembly Language Programming **3 Credit(s)**
- MATH 362 – Elementary Linear Algebra **3 Credit(s)**

Note:

* On the third grade of "W", "D", "F" in any of these courses, the student will not be permitted to continue pursuing a major in computer science at the University of Louisiana at Lafayette.

Electives

English Literature (3 Credits)

Choose from the General Education Core list of Literature courses.

Natural Sciences (6 Credits)

Choose from the General Education Core list of Natural Science courses. Courses must be for science majors.

Concentration (3 Credits)

Concentrations: Video Game Design and Development, Cloud Computing, Cognitive Science, Information Technology, Scientific Computing and Computer Engineering. A list of courses that satisfy concentration electives is available in the CMPS department.

Total: 29 Credits

Junior Year

Required Courses

- CMPS 430G – Computer Architecture **3 Credit(s)**
- CMPS 453G – Introduction to Software Methodology **3 Credit(s)**
- CMPS 455G – Operating Systems **3 Credit(s)**
- ENGL 365 – Technical Writing **3 Credit(s)**

- STAT 325 – Introduction to Statistics **3 Credit(s) or**
- STAT 427G – Statistical Methods for Researchers I **3 Credit(s)**

Electives

Communication (3 Credits)

Choose from:

- CMCN 100 – Principles of Human Communication **3 Credit(s)**
- CMCN 101 – Oral Communication for International Students **3 Credit(s)**
- CMCN 202 – Argumentation and Structured Decision-Making **3 Credit(s)**
- CMCN 203 – Honors Fundamentals **3 Credit(s)**
- CMCN 302 – Competitive Forensics **3 Credit(s)**
- CMCN 310 – Public Speaking **3 Credit(s)**

Natural Sciences (4 Credits)

Choose from courses for science majors. The associated lab must also be taken.

Computer Science (3 Credits)

Choose from courses for CMPS majors.

Concentration (3 Credits)

Concentrations: Video Game Design and Development, Cloud Computing, Cognitive Science, Information Technology, Scientific Computing and Computer Engineering. A list of courses that satisfy concentration electives is available in the CMPS department.

Total: 28 Credits

Senior Year

Required Courses

- CMPS 432G – Parallel and Distributed Computing **3 Credit(s)**
- CMPS 450G – Programming Languages **3 Credit(s)**
- CMPS 460G – Database Management Systems **3 Credit(s)**
- CMPS 490 – Senior Project **3 Credit(s)**

Electives

Fine Arts (3 Credits)

Choose from the General Education Core list of Fine Arts courses.

Elective (4 Credits)

Computer Science (3 Credits)

Choose from courses for CMPS majors.

Concentration (6 Credits)

Concentrations: Video Game Design and Development, Cloud Computing, Cognitive Science, Information Technology, Scientific Computing and Computer Engineering. A list of courses that satisfy concentration electives is available in the CMPS department.

Social/Behavioral Sciences (3 Credits)

Choose from the General Education Core list of Social/Behavioral Science courses. Three hours must be at the 200-level or above.

Total: 31 credits

Note:

† This program is accredited by the Computing Sciences Accreditation Board (CSAB/ABET). To qualify for graduation, a student must earn a grade of "C" or better in all CMPS, MATH, STAT, and EECE courses which are applied to the degree, as well as all concentration electives.

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