COMPUTER SCIENCE †
120 Hours
(revised Fall 2019)

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†This program is accredited by the Computing Accreditation Commission (CAC/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.

1 On the third grade of “W”, “D”, or “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.

2 To be chosen from Anthropology, Criminal Justice, Geography, Economics, Political Science, Psychology, or Sociology. At least 3 hours of behavioral science must be at the 200-level or above.

3 Selection may depend on concentration.

4 To be chosen from DANC, MUS, THEA, VIAR or DSGN.

5 Any course in ENGL or MODL that focuses on literary texts.

6 Must include both biological and physical sciences. All three courses must be courses intended for science or engineering majors. One of these courses must be taken with its associated lab. Six lecture hours must be in the same discipline.

7 Concentrations: Video Game Design and Development, Cloud Computing, Scientific Computing, and Computer Engineering. A list of courses that satisfy concentration electives is available in the CMPS office.

8 Must be a course for majors.
CONCENTRATION AREAS & REQUIREMENTS
2019-2020

Computer Engineering
CMPS 315  Introduction to Cybersecurity
CMPS 432  Parallel and Distributed Computing
MATH 302/350  Calculus III or Differential Equations
Elective¹
Elective¹
¹ Chosen from CMPS 315,497,498,499  EECE 233,240,335,340,355,413,434,464  STAT 417,454
Note: This concentration requires PHYS 201/207, 202/208 for the physical science lectures.

Cloud Computing
CMPS 315  Introduction to Cybersecurity
CMPS 432  Parallel and Distributed Computing
Elective¹
Elective¹
¹ Chosen from CMPS 353,358,359,360,420,452,497,498,499  INFX 240,320,321,330,412,443,450,451
¹² Chosen from ACCT 201 BLAW 310,410 BSAT 303 CJUS 401 ECON 300,320,330 MGMT 320,350
STAT 417,454

Scientific Computing
CMPS 315  Introduction to Cybersecurity
CMPS 432  Parallel and Distributed Computing
MATH 302  Calculus III
MATH 350  Differential Equations
Elective¹²
¹ Chosen from CMPS 352,415,497,498,499
¹² Chosen from MATH 435,440,455,475,481,483,487,491,493,495  STAT 417,454

Video Game Design & Development
CMPS 327  Introduction to Video Game Design & Development
CMPS 427  Video Game Design & Development
CMPS 315  Introduction to Cybersecurity
CMPS 432  Parallel and Distributed Computing
Elective¹²
¹ Chosen from CMPS 358,359,360,415,420,452,497,498,499  INFX 210
¹² Chosen from CMCN 365  ENGL 223,325,327  THEA 251,300  VIAR 235,365,366,465  STAT 417,454
Note: This concentration requires PHYS 207 (or PHYS 201) as a SCI elective.
Summary of Computer Science Requirements
Computer Science Core and Pre-requisite Structure

MATH 109
Pre-Calculus Algebra
(CMPS 150 Pre-requisite)

MATH 109 & 110
Pre-Calculus Alg & Trig
(CMPS 260 Pre-requisite)

MATH 270
Calculus I
(CMPS 340 & 341 Pre-requisite)

CMPS 150
Introduction to Computer Science

CMPS 260
Introduction to Data Structures

CMPS 261
Advanced Data Structures

CMPS 310
Computers in Society

CMPS 341
Foundations of Computer Science

CMPS 340
Design & Analysis of Algorithms

CMPS 346
Database Management Systems

CMPS 350
Computing Languages

CMPS 351
Computer Organization and Assembly Language Programming

CMPS 353
Principles of File Organization

CMPS 354
C# / .Net Software Development

CMPS 355
Operating System Theory

CMPS 358
Parallel & Distributed Computing

CMPS 359
Topics in Software Development
(1 - 3 Credits)

CMPS 415
Computer Graphics

CMPS 419
Artificial Intelligence

CMPS 420
Video Game Design and Development

CMPS 425
Theory of Computation

CMPS 427
Special Topics in Computer Science

CMPS 451
Compiler Construction

CMPS 452
Human-Computer Interface Design

CMPS 453
Introduction to Software Methodology

CMPS 454
Database Management Systems

CMPS 455
Computing Languages

CMPS 456
Operating System Theory

CMPS 457
Parallel & Distributed Computing

CMPS 497/498
Special Projects

CMPS 499
Special Topics in Computer Science

Computer Science Electives
# SCIENCE ELECTIVES

## Physical Sciences Lectures
- CHEM 107 3 hrs
- CHEM 108 3 hrs
- GEOL 105 3 hrs
- GEOL 106 3 hrs
- PHYS 207 3 hrs
- PHYS 208 3 hrs
- PHYS 201 4 hrs **
- PHYS 202 4 hrs **

## Biological Sciences Lectures
- BIOL 121 3 hrs
- BIOL 122 3 hrs
- BIOL 110 3 hrs **
- BIOL 111 3 hrs **

## Physical Sciences Labs
- CHEM 115 2 hrs  (pre-requisite is CHEM 108)
- GEOL 107 1 hr
- GEOL 108 1 hr
- PHYS 215 1 hr

## Biological Sciences Labs
- BIOL 123 1 hr
- BIOL 112 1 hr
- BIOL 113 1 hr

** these science lectures are those required by PHYS and BIOL majors

A student must select 9 hours of lecture, where at least one biological science and one physical science are included in the 9 hours. A student must also select one respective lab. Six of the nine lecture hours must be in the same science.

Students in the Computer Engineering concentration must take PHYS 207/208 for 6 of their 9 lecture hours. They are allowed, however, to take PHYS 201/202, which is the calculus-based sequence.

Note:
Students in the Computer Engineering concentration must earn a grade of C or better in PHYS 202 if they choose EECE 335 as one of their concentration electives.

**NOTES:**
Students who wish to enroll for a Special Project (CMPS 497 or 498) must have completed CMPS 341 and CMPS 351 and have an overall GPA of 2.5 or better.
LITERATURE ELECTIVES

ENGLISH – Any ENGL course that focuses on literary text. Linguistics, vocabulary development, and language courses do not qualify.

ARTS ELECTIVES

DANCE – DANC 101, 102, 113, 114

MUSIC – 104 (American Pop) 105 (All Styles), 108 (Jazz), 109 (Broadway), 306 (Music for the Teacher) 321/322 (Voice I/II), 323/324 (Piano Class), 325/326 (Guitar Class), 360 (Cajun & Zydeco Music), 364 (Music of the World)

THEATRE – THEA 161, 261

VISUAL ARTS – VIAR 120, 121, 122

DSGN 121 (Survey of Design)

HISTORY ELECTIVES

HISTORY – All courses except HIST 490

PHILOSOPHY – PHIL 101, 321, 322

BEHAVIORAL SCIENCES ELECTIVES

ANTHROPOLOGY – Any ANTH course, e.g., 100, 201, 202, 203

CRIMINAL JUSTICE – Any CJUS course, e.g., 101, 203, 205

ECONOMICS – 201, 202, 300

GEOGRAPHY – Any GEOG course, e.g., 103, 104, 380

POLITICAL SCIENCE – Any POLS course, e.g., 110, 220, 360, 370

PSYCHOLOGY – Any PSYC course, e.g., 110, 220, 255, 311, 312, 370

SOCIOLOGY – Any SOCI course, e.g., 100, 241

At least one of the two BHSC requirements MUST be at the 200-level or above.
NON-CREDIT COURSES

No Computer Science major may receive credit for ANY of the following:

1. ACSK courses
2. ADOS, All courses except ADOS 420
3. BSAT 101, 205 (or INFX 205), 206, 306, 311, 321
4. BCOM All courses
5. INFX 101
6. ENGR 101
7. ITEC 100 & ITEC 101
8. MATH - No course that is a prerequisite to a required course: 92, 100, 103/104, 105, 107, 140, 143, 117, 201, 206, 210, 217, 250, 317, 470
9. Any KNEA courses beyond 4 credit hours
10. Any AMUS courses beyond 4 credit hours
11. QMET 251, 252, 450
12. STAT 214
13. HONR 110, 210, 300, 310, 410
# Semester Course Offerings

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*Topics vary by semester
Advising

The Computer Science Department has established an advising structure that is supported by the Computer Science faculty and graduate students.

During the early advising period, you will be assigned to one of the faculty members by your last name. You may sign up with your advisor using the sign-up sheets in the CMPS Department office, Room 222.

After the early advising period, students will be advised by either setting up an appointment with their faculty member advisor, or by setting up an appointment with the department's graduate student advisor in Room 222G.

Appointments for Advising

You must make an appointment with your assigned faculty advisor. Please refer to ULink to see who your faculty advisor is. During the early advising period, sign up for an advising appointment using the sign-up sheet in the CMPS Department office, Room 222.

Schedule of Classes

The Schedule of Classes can be accessed online. Use the ULink/Banner system or consult the Registrar’s Web Page (https://registrar.louisiana.edu). Select Registration, then Schedule of Classes.

Use information found in the schedule of classes to complete a trial schedule before your appointment. Your advisor will clear your advising hold after you have completed an advising session with him/her.

Advantages of Early Registration

Scheduling is not something that should be done at the last minute. Taking some time to choose your classes wisely will help you graduate on schedule and also improves your performance each semester by distributing the workload of difficult project courses.

Information about Courses and Curriculum

Prerequisite – A prerequisite is an academic requirement which must be satisfied prior to enrolling in a course.

Corequisite – A corequisite is an academic requirement which must be satisfied concurrent with enrolling in a course. A student requesting a course must be currently enrolled in all corequisites listed for that course or must otherwise satisfy the instructor and the head of the department that he/she has had the equivalent preparation.

To obtain information about courses and the curriculum, consult the UL Lafayette catalog, the Computer Science Web Page (https://computing.louisiana.edu/computer-sciences), or this Advising Handout. These sources of information include the curriculum, the prerequisite structure of the computer science core, courses which may be chosen to fulfill the various degree requirements, regular fall and spring course offerings, and courses which do not count towards your degree.