COMPUTER SCIENCE †
120 Hours
(revised 10/12/2017)

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<th>Freshman Year</th>
<th>Credit</th>
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<td>Elective (BHSC) 2,3</td>
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†This program is accredited by the Computing Sciences Accreditation Board (CSAB/ABET). Students will be allowed to enter Upper Division if they have earned a grade of “C” or better in CMPS 261. 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, or VIAR, ARCH or Design.

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 for science majors. One of these courses must be taken with its associated lab.

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

8 Must be a course for majors.
CONCENTRATION AREAS & REQUIREMENTS
2015-2017
Revised: January 2017

Cognitive Science
- CMPS
- CMPS
- ENGL 351 Linguistics
- ELECT
- ELECT

1 Chosen from CMPS 415, 420, 452 or 359/499s that apply to the concentration
2 Chosen from PSYC 110, 313, 315, 330, 340, 360; ENGL 425, 452, 458; PHIL 342, 349, 361, 448; INFX 301

Computer Engineering
- MATH 302/350 Calculus III / Differential Equations
- EECE 240 Digital Systems
- EECE 355 Circuits and Signals
- EECE
- EECE

1 Chosen from EECE 233, 335, 340, 413
Note: This concentration requires PHYS 201/207, 202/208 for the physical science lectures.

Information Technology
- CMPS
- CMPS
- ACCT 201 Principles of Accounting I
- ELECT
- ELECT

1 Chosen from CMPS 353, 360, 420, 452, 359/499s that apply to concentration, or INFX 240, 320, 450, 451
2 Choose from ACCT 202, MGMT 320, 350, 390, BLAW 310, 415, 425, ECON 300, 320, 330, BSAT 303

Scientific Computing
- CMPS 352 Scientific Computing
- CMPS 415 Graphics
- MATH 302 Calculus III
- MATH 350 Differential Equations
- MATH

* If CMPS 352 not offered, choose from CMPS 3xx/4xx or MATH 3xx/4xx that applies to concentration.
1 Chosen from MATH 435, 440, 450, 455, 475, 481, 483, 487, 491, 493, 495

Video Game Design & Development
- CMPS 327 Introduction to Video Game Design & Development
- CMPS 427 Video Game Design & Development
Choose 3 from the following:
- CMPS 359 (Gaming Topic), 415, 420, 452, 499
- CMCN 365
- ENGL 223, 325, 327
- THEA 251, 300
- VIAR 235, 335, 365, 366, 465

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 261 Pre-requisite)

CMPS 150
Introduction to Computer Science

CMPS 150
Pre-requisite

CMPS 260
Introduction to Data Structures

CMPS 260
Pre-requisite

CMPS 261
Advanced Data Structures

CMPS 261
Pre-requisite

CMPS 310
Computers in Society

EECE 140
Computer Engineering

CMPS 341
Foundations of Computer Science

CMPS 340
Design & Analysis of Algorithms

CMPS 341
Pre-requisite

CMPS 351
Computer Organization and Assembly Language Programming

CMPS 355
Operating System Theory

CMPS 430
Computer Architecture

CMPS 450
Programming Languages

CMPS 455
Special Projects

CMPS 460
Database Management Systems

CMPS 470
Special Topics in Computer Science

CMPS 453
Introduction to Software Methodology

CMPS 475
Topics in Software Development
(1 - 3 Credits)

CMPS 460
Intro to Video Game Design and Development

CMPS 485
Game Design and Development

CMPS 490
Senior Project

CMPS 499
Special Topics in Computer Science

Computer Science Electives

CMPS 327
Introduction to Video Game Design and Development

CMPS 352
Scientific Computing

CMPS 353
Principles of File Organization

CMPS 358
C#/.Net Software Development

CMPS 360
Programming in Java

CMPS 415
Computer Graphics

CMPS 420
Artificial Intelligence

CMPS 427
Video Game Design and Development

CMPS 451
Compiler Construction

CMPS 452
Human-Computer Interface Design

CMPS 490
Senior Project

CMPS 497/498
Special Projects

CMPS 499
Special Topics in Computer Science
**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.

Students who wish to enroll in the Senior Project course (CMPS 490) must have completed 3 hours of 400-level CMPS courses, with a grade of 'C' or better, and permission of instructor.
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 – 105 (All Styles), 108 (Jazz), 109 (Broadway), 308 (Fund. of Music),
   321/322 (Voice I/II), 323/324 (Piano Class), 325/326 (Guitar Class),
   360 (Cajun & Zydeco Music), 362 (Creole & Black Music), 364 (Music of the World)

THEATRE – THEA 161, 261

VISUAL ARTS – VIAR 120, 121, 122

DSGN 121 (Survey of Design)

COMMUNICATIONS ELECTIVES (see note **)

COMMUNICATION

CMCN 100 (Principles of Human Communication), 101 (for international students only)
   202 (Argumentation & Debate), 203 (Honors 100), 212 (Introductory Newswriting)
   302 (Competitive Forensics), 310 (Public Speaking)

ENGL 360 (Advanced Writing)

ENGL 365 (Technical Writing)  **Note: This requirement is fulfilled with our curriculum.**

THEA 261 (Acting I)

HISTORY ELECTIVES

HISTORY - All courses except HIST 490

BEHAVIORAL SCIENCES ELECTIVES

ANTHROPOLOGY – Any ANTH course.
CRIMINAL JUSTICE – Any CJUS course.
ECONOMICS - 201, 202, 300
GEOGRAPHY – Any GEOG course.
POLITICAL SCIENCE – Any POLS course.
PSYCHOLOGY – Any PSYC course.
SOCIOLOGY – Any SOCI course.

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, 206, 306, 311, 321
4. BCOM All courses
5. CMPS All courses for non-majors
6. ENGR 101
7. ITEC 101
8. MATH - No course that is a prerequisite to a required course: 92, 100, 105, 107, 140, 143, 117, 201, 206, 210, 217, 250, 317, 470
9. Any KNEA courses beyond 4 credit hours
10. QMET 251, 252, 450
11. STAT 214
12. HONR 110, 210, 310, 410
# Semester Course Offerings

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<th>Course</th>
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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. Select the Current Students Link, then the Schedules of Classes link under the heading Courses and Calendars. 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 (http://www.louisiana.edu/Academic/Sciences/CMPS), 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.