School of Science and Engineering

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GENERAL REQUIREMENTS FOR STUDENTS MATRICULATING IN ACADEMIC YEAR: 2017-2018

DEGREE: COORDINATE MAJOR
MAJOR: COMPUTER SCIENCE
MINIMUM CUMULATIVE GRADE POINT AVERAGE: 2.0
MINIMUM MAJOR GRADE POINT AVERAGE: 2.0

TOTAL CREDITS: 120

### CORE CURRICULUM REQUIREMENTS

<table>
<thead>
<tr>
<th>Area</th>
<th>Credits</th>
<th>To Be Selected From</th>
<th>Requires Freshman &amp; Sophomore Courses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year Writing</td>
<td>4</td>
<td>ENGL 1010 or Equivalent</td>
<td>CMPS 1500 – Intro. to Computer Science I</td>
</tr>
<tr>
<td>TIDES – 1 course in fall semester</td>
<td>1-1.5</td>
<td></td>
<td>CMPS 1600 – Intro. to Computer Science II</td>
</tr>
<tr>
<td>Foreign Language – Competence at 1020-Level (1-2 courses depending on placement and language)</td>
<td>3-8</td>
<td>Arabic, Chinese, French, German, Greek, Hebrew, Italian, Japanese, Latin, Portuguese, Russian, or Spanish</td>
<td>CMPS 2170 – Discrete Mathematics (same as MATH 2170) CMPS 2200 – Intro. to Algorithms CMPS 2300 – Intro. to Systems and Networking</td>
</tr>
<tr>
<td>Cultural Knowledge – 1 Humanities 1 Fine Arts</td>
<td>6</td>
<td>Courses designated Humanities and Fine Arts</td>
<td>Spring of Sophomore Year – Meet with Undergraduate Coordinator in CS to declare coordinate major. In consultation with Undergraduate Coordinator, choose three CMPS courses at or above 3000-level. Students should declare their primary major before declaring coordinate major in CS.</td>
</tr>
<tr>
<td>Cultural Knowledge – Social Science</td>
<td>6</td>
<td>Courses designated Social Science</td>
<td>Junior Level Courses – Choose from: <a href="http://www2.tulane.edu/sse/cs/academics/undergraduate/junior-level.cfm">http://www2.tulane.edu/sse/cs/academics/undergraduate/junior-level.cfm</a> should be listed</td>
</tr>
<tr>
<td>Quantitative Reasoning 2 Math courses</td>
<td>8</td>
<td>MATH 1210 and 1220 or equivalent</td>
<td>Senior Level Courses – Choose from: <a href="http://www2.tulane.edu/sse/cs/academics/undergraduate/senior-level.cfm">http://www2.tulane.edu/sse/cs/academics/undergraduate/senior-level.cfm</a> should be listed</td>
</tr>
<tr>
<td>Scientific Inquiry – 1 Lab Science 1 Science or Math</td>
<td>7-8</td>
<td>Courses from departments designated Science</td>
<td>The Computer Science coordinate major requires students to complete a two-semester capstone project, CMPS 4010 and CMPS 4020.</td>
</tr>
<tr>
<td>Writing Intensive</td>
<td>4</td>
<td>Consult Major</td>
<td></td>
</tr>
<tr>
<td>Public Service – 1st Tier 2nd Tier</td>
<td></td>
<td>1000-3000-Level 3000-Level or above</td>
<td></td>
</tr>
<tr>
<td>Western Traditions</td>
<td>3</td>
<td>Refer to Undergraduate Core Curriculum Guide</td>
<td></td>
</tr>
<tr>
<td>Outside Western Traditions Or Comparative Cultures Intl. Perspectives</td>
<td>3</td>
<td>Refer to Undergraduate Core Curriculum Guide</td>
<td></td>
</tr>
</tbody>
</table>

### MAJOR REQUIREMENTS

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<th>Required Freshman &amp; Sophomore Courses:</th>
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<tr>
<td>CMPS 1500 – Intro. to Computer Science I</td>
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<tr>
<td>CMPS 1600 – Intro. to Computer Science II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMPS 2170 – Discrete Mathematics (same as MATH 2170)</td>
<td></td>
<td></td>
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<tr>
<td>CMPS 2200 – Intro. to Algorithms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMPS 2300 – Intro. to Systems and Networking</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**A Minor is not available for Computer Science.**

Through this course students develop the necessary tools, skills, and resources to become career ready, learning what it takes to be an excellent candidate in today’s competitive job market. While taking CRDV 1090 students will create and refine professional documents, explore careers, conduct job/internship searches, develop networking and interviewing skills, and learn to utilize professional social media in order to network more effectively. Students will learn about the job/internship search process and know how to actively use this information in the real world. Students will have the unique opportunity to take personality and strength assessments in order to learn about their talents, interests, and preferred work environments. Students participate in a Mock Interview event with professionals from New Orleans.

- The Degree Plan and other information provided in this booklet serve only as advising tools. Newcomb-Tulane College advisors will help advise you on the core-curriculum, decide on a major, and consult on any academic success issues.
- Your major advisors will advise you on major requirements.
- Students with multiple majors will have more than one advisor and will need to consult with the appropriate advisor.
- Minors are not assigned an advisor, but a faculty member in the department is designated to advise minors.
- Become familiar with your major! By declaring early, you have access to a major advisor, are able to enroll in “majors only” classes, and are included in list serves that allow you to receive information about events, internships, and other opportunities.
- Pre-med and Pre-law students should also consult with one of the Pre-Professional advisors.
GENERAL INFORMATION
- Complete informational interviews with current computer science professionals to help establish career goals.
- Having related experience is critical to most employers that hire computer science majors. Obtain an internship, co-op, or part-time job in a relevant area to increase employability.
- Obtain vendor specific certifications or networking certifications to gain a competitive advantage.
- Develop strong interpersonal, communication, and other “soft skills.” Learn to work well on a team and to meet deadlines. Learn to communicate effectively with technical and non-technical colleagues.
- To maximize career options, supplement technical education with business coursework.
- Programming and consulting may go hand-in-hand. Many occupations in these areas have responsibilities that overlap.

SKILLS
- Computer knowledge
- Decision making skills
- Be able to analyze, compare, and interpret facts and figures quickly
- Critical thinking skills
- High proficiency in written/oral communications
- Analytical skills
- Ability to explain complex concepts/theories

CAREER AREAS

PROGRAMMING
- Systems
- Business Applications
- Warehousing
- Maintenance
- Scientific Applications
- Intelligence
- Information Delivery
- Project Management

SYSTEMS DEVELOPMENT
- Analysis
- Design
- Support
- Quality Assurance
- Specialty Systems
- Database
- Client-Server
- Expert

CONSULTING
- System installation
- System implementation
- Training
- Consulting Firms
- Self-employed

INTERNET
- Programming
- Software design
- Systems analysis
- Hardware production
- Web page design

EMPLOYERS

- Computer vendors
- Software and computer companies
- Any large corporation including:
  - Banks, retail chains, manufacturers, universities, and government agencies
  - Management consulting firms
  - Contract and temporary employers
  - Research laboratories
- Banks and financial institutions
- Insurance companies
- Consulting firms
- Manufacturers
- Local, state and federal government
- Computer companies
- Research institutions
- Network access points
- Backbone operators
- Online service providers
- Internet service providers
- Computer/equipment vendors
- Internet-related companies including browsers, search engines & Website design services
- Large businesses

If you think you might be interested in this major, but you are not absolutely sure, an exploratory advisor can help you explore major and career options, please go to: Explore.Tulane.edu

If you are interested in information about Law Professions, please go to: LawProfessions.Tulane.edu

If you are interested in information about Health Professions, please go to: HealthProfessions.Tulane.edu
## What Can I Do with a Major in…
### Computer Science

**NETWORK TECHNOLOGY**
- Installation and maintenance
- Administration

- Variety of organizations and industries

**EDUCATION**
- Teaching
- Instructional technology

- Public and private schools, K-12
- Colleges and universities

**NON-TECHNICAL**
- Customer/product support
- Technical writing
- Sales and marketing

- Software/hardware manufacturers
- Retail stores
- Software vendors

### PROFESSIONAL ORGANIZATIONS

- **Association for Computing Machinery**
  [www.acm.org](http://www.acm.org)

- **Association for Information Technology Professionals**
  [www.aitp.org](http://www.aitp.org)

- **Association for Women in Computing**
  [www.awc-hq.org](http://www.awc-hq.org)

- **Computer Professionals for Social Responsibility**
  [www.cpsr.org](http://www.cpsr.org)

- **Independent Computer Consultants Association**
  [www.icca.org](http://www.icca.org)

- **Network Professional Association**
  [www.npanet.org](http://www.npanet.org)

- **Society for Technical Communication**
  [www.stc.org](http://www.stc.org)

- **Women in Technology**
  [www.womenintechnology.org](http://www.womenintechnology.org)

### RELATED WEBSITES & ASSOCIATIONS

- **Dice: The Career Hub for Tech**
  [www.dice.com](http://www.dice.com)

- **Computer Jobs**
  [www.computerjobs.com](http://www.computerjobs.com)

- **Computer Work**
  [www.computerwork.com](http://www.computerwork.com)

- **IT Jobs**
  [www.itjobs.com](http://www.itjobs.com)

- **Tech Careers**
  [www.techcareers.com](http://www.techcareers.com)