Course Flow (Basic Science & Compulsory courses)

Academic Year 2019

Legend

- Compulsory
- Prerequisite

**Natural Science**
- Academic Year 1
  - Fall: Physics(I)
  - Spring: Chemistry(I)
- Academic Year 2
  - Fall: Physics(II)
  - Spring: Chemistry(II)
- Academic Year 3
  - Fall: General Biology(I)
  - Spring: General Biology(II)
- Academic Year 4
  - Fall: Basic Programming (Verification test)

**Mathematics**
- Fall: Calculus(I)
- Spring: Calculus(II)

**Computer Science**
- Fall: Intro. to Computers and Programming
- Spring: Data Structures and Object-oriented Programming

**Computer Science and Engineering Projects**
- Academic Year 1
  - Fall: Intro. to Operating Systems
  - Spring: Computer Science and Engineering Projects(I)
- Academic Year 2
  - Spring: Computer Science and Engineering Projects(II)

**Legend**
- Compulsory
- Prerequisite
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<th>Topics</th>
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<th>Academic Year 3</th>
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<td>Fall</td>
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<tr>
<td>AI and Data Science</td>
<td>Intro. to Database Systems</td>
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<td>Intro. to Machine Learning</td>
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<td>Intro. to Artificial Intelligence</td>
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<td>Computer Security</td>
<td>Intro. to Computer Networks</td>
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<td>Intro. to Cryptography</td>
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<td>Computer Security Capstone</td>
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<td>Network Engineering</td>
<td>Principles of Communications and Wireless Networks</td>
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<td>Intro. to Network Programming</td>
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<td>Network Systems Capstone</td>
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<td>System Software</td>
<td>Intro. to Compiler Design</td>
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<td>Advanced Programming in the UNIX Environment</td>
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<td>Computer System Administration</td>
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<td>Theory of Computation</td>
<td>Intro. to Formal Languages</td>
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<td>Competitive Programming(1)</td>
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<td>Graph Theory or Fundamental Graph Theory</td>
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