Course Flow of Seven Topics Program

Academic Year 2020

**Topics**

<table>
<thead>
<tr>
<th>Academic Year 2</th>
<th>Academic Year 3</th>
<th>Academic Year 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall</strong></td>
<td><strong>Fall</strong></td>
<td><strong>Fall</strong></td>
</tr>
<tr>
<td><strong>Spring</strong></td>
<td><strong>Spring</strong></td>
<td><strong>Spring</strong></td>
</tr>
</tbody>
</table>

**Legend**

- Program Compulsory
- Common Compulsory of 2 Programs

**Topics**

- **AI and Data Science**
  - Intro. to Database Systems
  - Numerical Methods
  - Intro. to Machine Learning
  - Intro. to Artificial Intelligence

- **Computer Security**
  - Intro. to Cryptography
  - Computer Security Capstone

- **Network Engineering**
  - Intro. to Computer Networks
  - Principles of Communications and Wireless Networks
  - Network Systems Capstone

- **Multimedia Engineering**
  - Numerical Methods
  - Intro. to Computer Graphics
  - Multimedia and Human Computer Interaction Capstone

- **System Software**
  - Intro. to Compiler Design
  - Advanced Programming in the UNIX Environment
  - Computer System Administration
  - Operating Systems Capstone

- **Software and Hardware Integration**
  - Digital Circuit Lab.
  - Microprocessor Systems: Principles and Implementation
  - Embedded System Capstone

- **Theory of Computation**
  - Intro. to Formal Languages
  - Competitive Programming(I)
  - Graph Theory or Fundamental Graph Theory
  - Selected Topics in Intractable Problems or Randomized Algorithms