### Check List for BS in Computer Science

**Computer Science (43 Hours):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Tr</th>
<th>Fall, Spring, Summer</th>
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<tbody>
<tr>
<td>COSC 1410</td>
<td>Introduction to Computer Science I</td>
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<tr>
<td>COSC 1320</td>
<td>Introduction to Computer Science II</td>
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<tr>
<td>COSC 2320</td>
<td>Data Structures</td>
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<tr>
<td>COSC 2410</td>
<td>Computer Organization and Programming</td>
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<tr>
<td>COSC 3320</td>
<td>Algorithms and Data Structures</td>
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<tr>
<td>COSC 3330</td>
<td>Computer Architecture</td>
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<tr>
<td>COSC 3340</td>
<td>Introduction to Automata and Computability</td>
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<td>COSC 3380</td>
<td>Design of File and Database Systems</td>
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<td>COSC 4211</td>
<td>Computer Scientists and Society</td>
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<tr>
<td>COSC 4330</td>
<td>Fundamentals of Operating Systems</td>
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<tr>
<td>COSC 4351</td>
<td>Fundamentals of Software Engineering</td>
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- **MATH (20 Hours):**
  - MATH 1431 Calculus I
  - MATH 1432 Calculus II
  - MATH 2331 Linear Algebra
  - MATH 3336 Discrete Mathematics
  - MATH 3338 Probability
  - MATH 3339 Statistics

- **NATURAL SCIENCES (14 Hours):**
  - 1 hour Natural Sciences Lab
  - 3 hours NSM Approved Natural Science
  - 3 hours Advanced COSC elective

- **CORE**
  - First Year Writing I
  - First Year Writing II

- **STATE REQUIREMENTS (12 Hours):**
  - HIST 1376 or 1377 The United States to 1877
  - HIST 1378 or 1379 The United States Since 1877
  - POLS 1336 U.S. and Texas Constitutions and Politics
  - POLS 1337 U.S. Government: Congress, President, and Court

**FROM APPROVED CORE LIST (12 Hours):**

- Language/Philosophy/Culture
- Creative Arts
- Social & Behavioral Science
- Writing in the Disciplines

**FREE ELECTIVES** (Additional hours to complete a total of 120 hours, including at least 36 advanced hours)

**RULES YOU NEED TO KNOW:**

1. MINIMUM of a 2.00 GPA in cumulative, major, and minor GPA to graduate
2. C- RULE: MAXIMUM of 6 hours of grades below C- allowed in UH COSC courses
3. LAST 30 hours must be exclusively completed at UH
4. MAXIMUM of 90's allowed during entire undergraduate career
5. MINIMUM of 36 advanced hours and 120 total hours to graduate
6. MAXIMUM of 66 lower level transfer hours may be applied towards UH degree
7. At 60 hours, must request a Major Degree Plan "REQUIRED TO GRADUATE"

**EXAMPLES OF COMPUTER SCIENCE ELECTIVES**

- COSC 4315 Programming Languages and Paradigms
- COSC 4332 Medical Robotics and Image Guided Interventions
- COSC 4335 Data Mining**
- COSC 4348 Introduction to Gaming Art and Animation
- COSC 4349 Intermediate Game Art and Animation
- COSC 4348 Artificial Intelligence Programming**
- COSC 4370 Interactive Computer Graphics
- COSC 4371 Web Security
- COSC 4372 Fundamentals of Medical Imaging
- COSC 4377 Introduction to Computer Networks**
- COSC 4378 Introduction to Digital Image Processing
- COSC 4379 Selected Topics in Computer Science

**MUST COMPLETE ONE OPTION FROM:**

- **COSC - BUSINESS OPTION**
  - ACCT 2331 Accounting Principles I - Financial
  - MIS 3360 Systems Analysis and Design
  - MIS 4379 Information Technology Project Management
  - OR MIS 4378 Administration of Computer-Based MIS
  - OR MIS 4379 Business Systems Consulting

- **COSC - SCIENCE OPTION**
  - MATH 1433 Calculus III
  - MATH 4__ 3 hours 4000-level MATH elective

- **COSC - SOFTWARE DESIGN OPTION**
  - COSC 3330 Software Development Practices
  - COSC 4349 Introduction to Ubiquitous Computing

**NSM CAPSTONE** (See COSC academic advisor for more information):

- COSC - Business Option
- COSC - Science Option
- COSC - Software Option

Students satisfy the NSM Capstone by completion of MIS coursework.

Students are encouraged to file for a Mathematics minor (and meet all Mathematics minor requirements) to satisfy the NSM Capstone.

Students satisfy the NSM Capstone by completion of additional COSC coursework.

**Advisor:**

VN/02/12/15