Checklist for BS in Computer Science

**Computer Science (45 Hours, 30 hours Advanced):**

- COSC 1336: Computer Science and Programming
- COSC 1437: Introduction to Programming
- COSC 2436: Programming and Data Structures
- COSC 2425: Computer Organization and Architecture
- COSC 3320: Algorithms and Data Structures
- COSC 3340: Introduction to Automata and Computability
- COSC 3337: Data Science I
- COSC 2436: Programming and Data Structures
- COSC 3371: Cybersecurity
- COSC 3360: Fundamentals of Operating Systems
- COSC 3380: Database Systems
- COSC 4351: Fundamentals of Software Engineering
  OR
  COSC 4353: Software Design
- COSC __3__: 3 hours Advanced COSC elective*
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**Mathematics:**

- MATH 2413: Calculus I
- MATH 2414: Calculus II
- MATH 2305: Discrete Mathematics
  OR
  COSC 2305: Computing Structures
- MATH 2318: Linear Algebra
  OR
  MATH 3321: Engineering Mathematics
- MATH 3339: Statistics for the Sciences

**NSM Approved Natural Sciences (14 Hours):**

- 1 hr NSM Natural Science Lab
- 1 hr NSM Natural Science Lab
- 3 hr NSM Natural Science Lecture
- 3 hr NSM Natural Science Lecture
- 3 hr NSM Natural Science Lecture
- 3 hr NSM Natural Science Lecture

**Communication (6 Hours):**

- ENGL 1301: First Year Writing I
- ENGL 1302: First Year Writing II

**Hist & Govt Requirements (12 Hours):**

- American History (3 Hours)
- American History (3 Hours)
- GOVT 2305: U.S. Government: Congress, President, and Court
- GOVT 2306: U.S. and Texas Constitutions and Politics

**Additional Core (12 Hours):** Choose from UH Core Website

- Language, Philosophy & Culture (3 Hours)
- Creative Arts (3 Hours)
- Social & Behavioral Sciences (3 Hours)
- Writing in the Disciplines (3 Hours)

**Examples of Computer Science Electives**

- COSC 3337: Data Science I
- COSC 3371: Cybersecurity
- COSC 4315: Programming Languages and Paradigms
- COSC 4321: Immersive Technology & Spatial Computing
- COSC 4332: Medical Robotics and Image Guided Interventions
- COSC 4337: Data Science II
- COSC 4346: Numerical Methods
- COSC 4368: Artificial Intelligence Programming
- COSC 4370: Interactive Computer Graphics
- COSC 4371: Security Analytics
- COSC 4372: Fundamentals of Medical Imaging
- COSC 4377: Introduction to Computer Networks
- COSC 4393: Digital Image Processing
- COSC 4397: Selected Topics in Computer Science

*May be taken as an elective if not applied towards Capstone*

**NSM Capstone Options**

- Minor
- Double Major
- Dual Degree
- Senior Research Project
- Senior Honors Thesis
- teachHOUSTON
- Software Design (COSC 4353 & COSC 4354/4355)
- Game Development (COSC 4358 & COSC 4359)
- Data Science (COSC 3337 & COSC 4337)
- Cybersecurity (COSC 3371 & COSC 4371)

**Courses taken for these capstones cannot be used towards the COSC Advanced Elective**

**COSC 4353 cannot be used for Software requirement, must take COSC 4351**

**COSC 4359 also requires COSC 4370 as a pre-requisite**

**Free Electives**

- (Additional hours to complete a total of 120 hours)

**Rules You Need to Know:**

1. Minimum of a 2.00 GPA in cumulative, major, and minor GPA to graduate
2. Pre-Req Rule: Must earn C- or better in pre-requisite for COSC courses
3. C-Rule: Maximum of 6 hours of grades below C- allowed in UH COSC courses
4. Last 30 hours must be exclusively completed at UH
5. Maximum of 6 W's allowed during entire undergraduate career
6. Minimum of 36 advanced hours and 120 total hours to graduate
7. Maximum of 66 lower level transfer hours may be applied towards UH degree