Bachelor of Science in Embedded Software Engineering Flowchart
(Spring 2019, 132 hours)

Freshman

- **MCS 1414** Calculus 1
- **CHM 1213** U Chem 1
- **PHY 2423** U Phys 2
- **ESE 2001** Embedded Software Engr Lab 1*
- **LLT 1213** World Masterpieces 1
- **COM 1103** College Comp
- **COM 1103** Intro to ECE
- **MCS 1142** Or Placement Test

Sophomore

- **MCS 1424** Calculus 2
- **CHM 1221** U Chem 1 Lab
- **PHY 2413** U Phys 1
- **EE 2214** Dig Elec & Lab
- **MCS 1514** Cmp Sci 1
- **LLT 1213** World Masterpieces 1
- **EE 2214** Intro to ECE
- **MCS 1424** Calculus 2

Junior

- **MCS 2414** Calculus 3
- **EE 2214** U Phys 2 Lab
- **EE 3233** Circuits and Electronics
- **EE 3253** Software Engineering 2 *
- **EE 3223** Adv Dig. Elect.
- **MCS 2523** Discrete Math
- **EE 3233** Adv Dig. Elect.
- **ESE 3011** Intro to ECE Projects

Senior

- **MCS 2613** Software Engineering 2 *
- **ESE 3011** Embedded Software Engr Lab 2 *
- **ESE 3001** Embedded Software Engr Lab 3 *
- **EE 3513** Software Architecture *
- **EE 3233** Adv Dig. Elect.
- **ESE 3011** Embedded Software Engr Lab 3 *
- **MCS 2534** Data Structures
- **EE 4214** Embedded Systems Lab
- **MCS 2513** Software Engineering 1
- **EE 3233** Adv Dig. Elect.
- **EE 4241** Embedded Systems
- **ESE 3011** Embedded Software Engr Lab 3 *
- **MCS 2514** Software Quality & Proj Mgm *
- **EE 4273** Real Time Systems
- **MCS 2424** Calculus 3
- **EE 4913** Directed Study in EE (Adv Embedded Systems Lab) *

Pre-req: (1) has to be taken before or concurrently with (2) XXX YYYY Course Title: Course is on the CRITICAL PATH for 4-year graduation plan

*: Visit [https://www.ltu.edu/arts_sciences/humanities_ss_comm/writing-proficiency-exam.asp](https://www.ltu.edu/arts_sciences/humanities_ss_comm/writing-proficiency-exam.asp) & Online Course Catalog

Note: See Program Handout for details about selecting Concentrations and ESE Electives & complete pre-req structure (note some lower level pre-reqs are not shown with upper level subjects)