

**School of Engineering and Engineering Technology**  
**ELECTRICAL AND COMPUTER ENGINEERING, B.S.**  
**MECHATRONICS CONCENTRATION (ECMC)**  
**2024-25**

PROPOSED COURSE SEQUENCE

<b>First Semester - Fall</b>			
<b>16 Hours</b>			
___	BIBL	1033	3 Biblical Literature
___	COSC	1303	3 Computer Science I
___	ENGL	1013	3 English Composition I
___	ENGR	1513	3 Intro to Engineering Practice I (Fall only)
___	LETU	1101	1 Cornerstones of Life & Learning
___	MATH	1903	3 Calculus I <sup>(1)</sup>

<b>Second Semester - Spring</b>			
<b>17 Hours</b>			
___	ENGL	1023	3 English Composition II
___	ENGR	1311	1 Manufacturing Processes Lab
___	ENGR	1523	3 Intro to Engineering Practice II (Spring only)
___	MATH	2013	3 Calculus II <sup>(1)</sup>
___	PHYS	2011	1 University Physics I Lab (Spring only)
___	PHYS	2013	3 University Physics I (Spring only)
___	THEO	2043	3 Biblical Theology for the Christian Life

<b>Third Semester - Fall</b>			
<b>17 Hours</b>			
___	COMM	1113	3 Intro to Speech Communication
___	EEGR	2051	1 Circuits & Measurements Lab <sup>(1)</sup>
___	EEGR	2053	3 Electric Circuits <sup>(1)</sup>
___	MATH	2203	3 Differential Equations
___	MEGR	2013	3 Statics <sup>(1)</sup>
___	PHYS	2021	1 University Physics II Lab (Fall only)
___	PHYS	2023	3 University Physics II (Fall only)

<b>Fourth Semester - Spring</b>			
<b>15 Hours</b>			
___	EEGR	2163	3 Advanced Circuits (Spring only) <sup>(1)</sup>
___	EEGR	3213	3 Digital Electronics
___	ENGR	2400	0 Sophomore Design Seminar (Spring only)
___	MATH	2003	3 Discrete Mathematics
___	MATH	2023	3 Calculus III
___	MEGR	2023	3 Dynamics <sup>(1)</sup>

<b>Fifth Semester - Fall</b>			
<b>16 Hours</b>			
___	CHEM	1111	1 General Chemistry I Lab
___	CHEM	1113	3 General Chemistry I
___	EEGR	3243	3 Electronics and Lab (Fall only)
___	EEGR	3523	3 Mechatronics (Fall only)
___	MATH		3 Math Elective <sup>(4)</sup>
___			3 Civic Engagement Elective

<b>Sixth Semester - Spring</b>			
<b>16 Hours</b>			
___	BIBL		3 Biblical Engagement Elective
___	EEGR	3233	3 Intro to Microcontrollers (Spring only) <sup>(2)</sup>
___	ENGR	2704	4 Project Mgmt, Design & Entrepreneurship
___	MCHR	4413	3 Robotics (Spring only)
___	MEGR	3323	3 Mechanics of Materials <sup>(1)</sup>

<b>Seventh Semester - Fall</b>			
<b>15 Hours</b>			
___	ENGR	4813	3 Senior Design I (Fall only)
___	MATH	3403	3 Statistics
___	MEGR	4443	3 Machine Design (Fall only)
___			3 Humanities & Fine Arts Elective
___			3 Technical Elective <sup>(5)</sup>

<b>Eighth Semester - Spring</b>			
<b>15 Hours</b>			
___	BUSI	3023	3 Entrepreneurship for Engineers <sup>(3)</sup>
___	EEGR	4283	3 Digital Signal Processing (Spring only)
___	ENGR	4823	3 Senior Design II (Spring Only)
___			3 Civic Engagement Elective
___	THEO		3 Theological Engagement Elective

**TOTAL HOURS 127**

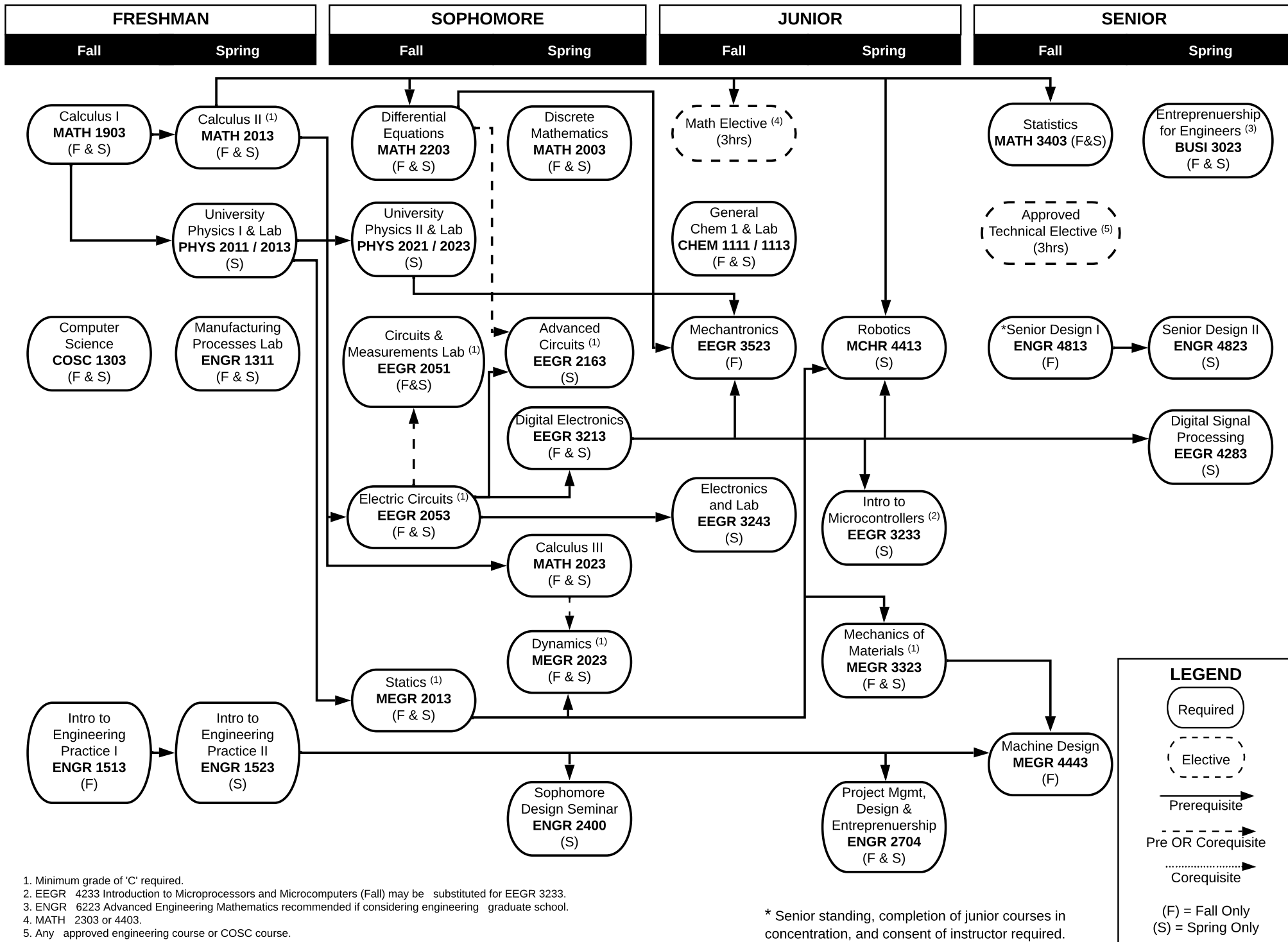
1: Minimum grade of 'C' required.

2: EEGR 4233 Introduction to Microprocessors and Microcomputers (Fall) may be substituted for EEGR 3233.

3: ENGR 6223 Advanced Engineering Mathematics recommended if considering engineering graduate school.

4: MATH 2303 (recommended) or 4403

5: Any approved engineering course or COSC course



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 2. EEGR 4233 Introduction to Microprocessors and Microcomputers (Fall) may be substituted for EEGR 3233.  
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 4. MATH 2303 or 4403.  
 5. Any approved engineering course or COSC course.

\* Senior standing, completion of junior courses in concentration, and consent of instructor required.