

## Four Year Road Map: Machinery Systems Engineering Specialization

This Road Map is a tool to assist you and your advisor in planning your academic career. Use it along with the Curriculum Sheet for your major, your DARS report, the appropriate checklist in the back of this document, and the Timetable. Your specific program of study could, and probably will, look different. You need to customize the Road Map to fit your situation, and consult with your advisor about the best path for you.

Year 1 – Fall Semester Course	Credits
Math 221 - Calculus and Analytic Geometry	5
Chemistry 109 - Advanced General Chemistry	5
Social Science (See I.E.4)	3
EPD 155 – Basic Communication (See I.C.)	2
	15

Year 2 – Fall Semester Courses	Credits
Math 234 – Calculus - - Functions of Several Variables	3
Computer Science 310 - Problem Solving Using Computers	3
EMA 202 - Dynamics	3
M E 331 - Geometric Modeling for Engineering Applications	3
BSE 249 – Engineering Principles for Biological Systems	3
	15

Year 3– Fall Semester Courses	Credits
BSE 475 – Engineering Principles of Agricultural Machinery	3
BSE 364 – Engineering Properties of Food and Biological Materials	3
M E 363 – Fluid Dynamics	3
Statistics 224 - Introductory Statistics for Engineers	3
Ag & Life Sciences (See VI.C.)	3
	15

Year 4– Fall Semester Courses	Credits
BSE 509 – Biological Systems Engineering Senior Design	3
M E 340 - Introduction to Dynamic Systems	3
I SY E 313 Engineering Economics	3
Humanities (See I.E.3)	3
Technical Elective (See VI.D.)	3
BSE 409-Career Management for Engineers	1
	16

Year 1 – Spring Semester Courses	Credits
Math 222 - Calculus and Analytic Geometry	5
M E 231 – Introductory Engineering Graphics	2
Biological Science (See I.F.)	3
EMA 201-Statics	3
Economics Course	4
	17

Year 2 – Spring Semester Courses	Credits
M E 361 - Thermodynamics	3
M E 306/07 – Mechanics of Materials/Lab	4
BSE 375 Biological Concepts for Engineers	3
Physics 202 – General Physics	5
	15

Year 3 – Spring Semester Courses	Credits
BSE 476 – Engineering Principles of Off-Road Vehicles	3
BSE 365 – Measurements and Inst. for Biological Systems	3
M E 313 - Manufacturing Processes	3
EPD 397 – Technical Communications (See I.C.)	3
Ethnic Studies/International (See I.E. 2 & I.H.)	3
Technical Elective (see VI.D)	3
	18

Year 4 – Spring Semester Courses	Credits
Breadth Requirement (See VI.D.)	3
Technical Elective (See VI.D.)	3
Humanities (See I.E. 3)	3
Technical Elective (See VI.D.)	3
Technical Elective (See VI.D.)	3
Technical Elective (See VI.D.)	2
	17

**Notes:** Need 128 credits to complete degree. If Chemistry 103 & 104 is taken in place of Chemistry 109, it is suggested to take Chemistry 103 in Fall semester and Chemistry 104 in Spring semester of year 1.