ROBOTICS ENGINEERING (BS)

Course	Title	Credit Hours
First Year Fall		
ENGL 1101	English Composition I (minimum grade of C)	3
MATH 1131	Calculus with Analytic Geometry I (minimum grade of C; 3 credits Area A and 1 credit Area F)	4
CHEM 1211	Principles of Chemistry I (minimum grade of C)	3
CHEM 1211L	Principles of Chemistry I Lab (minimum grade of C)	1
ENGR 2255	Engineering Graphics and Computer Aided Design (minimum grade of C)	3
Area B2	ITDS 1779 (2), LEAD 1705 (2), PERS 1506 (1; may be repeated with different topic), PERS 1507 (2)	1
ENGR 1701	Introduction to Robotics (minimum grade of C)	1
	Credit Hours	16
Spring		
ENGL 1102	English Composition II (minimum grade of C)	3
MATH 1132	Calculus with Analytic Geometry II (minimum grade of C)	4
PHYS 2211	Principles of Physics I (minimum grade of C)	3
PHYS 2311	Principles of Physics I Lab (minimum grade of C)	1
AREA H	Elective (minimum grade of C)	3
KINS 1106 or PHED 1205	Lifetime Wellness or Concepts of Fitness	2
	Credit Hours	16
Second Year Fall		
MATH 2115	Introduction to Linear Algebra (minimum grade of C)	3
PHYS 2212	Principles of Physics II (minimum grade of C)	3
PHYS 2312	Principles of Physics II Lab (minimum grade of C)	1
ENGR 2115	Statics (minimum grade of C)	3
ENGR 2221	Computing for Engineers 1 (minimum grade of C)	3
Area E	Behavioral Science ¹	3
	Credit Hours	16
Spring MATH 3107	Differential Equations (minimum grade of C)	3
ENGR 2206	Digital Logic (minimum grade of C)	4
ENGR 2125	Dynamics of Rigid Bodies (minimum grade of C)	3

Area B1COMM 1110 Public Speaking or foreign language 1001, 1002, 2001, 20023Credit Hours16Third Year FallFallMATH 2135Calculus with Analytic Geometry 3 (minimum grade of C)4ENGR 3236Introduction to Signal Processing (minimum grade of C)3ENGR 3235Circuit Analysis (minimum grade of C)3ENGR 5245Uminimum grade of C2Area CHumanities Elective3MATH 3175Introduction to Probability (minimum grade of C)3ENGR 3275Feedback Control Systems (minimum grade of C)3ENGR 3255Sensors and Actuators (minimum grade of C)3ENGR 3255Sensors and Actuators (minimum grade of C)3ENGR 3255Sensors and Actuators (minimum grade of C)3ENGR 4261Credit Hours16Fourth Year Fall16ENGR 4391Robotics Senior Design 1 (minimum grade of C)3ENGR 5161UElements of Machine Intelligence (minimum grade of C)3ENGR 5176UKinematics and Dynamics (minimum grade of C)3ENGR 5176UKinematics Senior Design 2 (minimum grade of C)3ENGR 5176UKinematics and Dynamics (minimum grade of C)3ENGR 51376UMicroelectronic Circuits (minimum grade of C)3ENGR 5238UIntroduction to Embedded Systems (minimum grade of C)3ENGR 5238UIntroduction to Embedded Systems (minimum grade of C)3ENGR 5151U </th <th>AREA H</th> <th>Elective (minimum grade of C)</th> <th>3</th>	AREA H	Elective (minimum grade of C)	3
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Total Credit Hours 123		Credit Hours	14
		Total Credit Hours	123

¹ Students are recommended to take ECON 2105 Macroeconomics or ECON 2106 Microeconomics as their Area E Behavioral Science course.

Additional Notes

- Courses in Areas B, C, E, and Wellness are interchangeable and can be taken at any time, with a recommendation of only taking one per semester to spread them out.
- This course map assures placement in MATH 1131 Calculus I first fall semester. If the student is not able to take it first semester, then many courses are pushed back one year (Physics, Statics, and anything that has those as prerequisites). Students are highly encouraged to take a math placement test as soon as possible before their first semester.
- Students are recommended to take ECON 2105 or ECON 2106 as their Area E Behavioral Science course.
- This program map illustrates appropriate coursework for completing a degree within four years, provided the course grades allow for earned credit. Please consult with your advisor to determine when courses can be switched out with others and taken in a different semester or sequence than illustrated since not all courses are taught every semester. This map is for illustrative purposes only and does not constitute a legal contract on the part of CSU since degree requirements or course offerings could change. As always, check with your advisor.