# FONTBONNE-SIUE Dual Degree MECHATRONICS AND ROBOTICS ENGINEERING

FONTBONNE - YEAR I (Fall Odd / Spring Even)

ENG 101 Composition I (ENG 101) CIS 160 Computer Science I	4	ENG 102 Composition II (ENG 102) CIS 160 Computer Science II	4
INT 105 Culture and the Common Good	3	MTH 115 Introduction to Statistics	3
LIB 199 Information Navigation & Evaluation	1	MTH 150 Calculus w/ Analytic Geometry I (MATH 150)	4
MTH 120 Discrete Mathematics	3	COM 102 Public Speaking (ACS 103)	3
CHM 108 General Chemistry I w/lab (CHEM 121A/125A)	4	GOV 101 US & Missouri Constitution	1
TOTAL	18	TOTAL	18

**FONTBONNE - YEAR II (Fall Even / Spring Odd)** 

CIS 210 Object-Oriented Programming	4	MTH 250 Calculus w/ Analytic Geometry III (MATH 250)	4
MTH 151 Calculus w/ Analytic Geometry I (MATH 152)	4	MTH 288 Portfolio A	0
MTH 315 Advanced Statistics (STAT 380)	3	MTH 300 Modeling & Numerical Approximations	3
PHY 218 Engineering Physics I w/lab (PHYS 141/151L)	4	MTH 310 Differential Equations (MATH 305)	3
ECN 210 Principles of Macroeconomics(ECON 111) or GER	3	PHY 220 Engineering Physics II w/lab (PHYS 142/152L)	4
		GER*	3
TOTAL	18	TOTAL	17

FONTBONNE - YEAR III (Fall Odd / Spring Even)

BIO 203 Science & Society (MCII & Intensive Writing)	3	MTH 430 Algebraic Structures	3
MTH 200 Linear Algebra	3	MTH 498 Senior Portfolio	1
MTH 316 Non-Parametric Statistics	3	MTH 499 Senior Synthesis	3
ART 155 Art Appreciation (ART 111) (BFPA)	3	BIO 108 Intro to Life Science w/Lab (BLS)	3
GER*	3	GER*	3
GER*	3	GER*	3
TOTAL	18	TOTAL	. 16

<sup>\*</sup>GERs Required: PHL 260+, Religion and HST 103/104/or107

Summer coursework or possible additional year at SIUE

IE 106 Engineering Problem Solving	3	CE 242 Mechanics of Solids	3	
CE 240 Statics	3	ECE 211 Circuit Analysis II	4	
ECE 210 Circuit Analysis I	3	ME 262 Dynamics	3	

Admission to upper-division courses requires satisfactory completion of lower-division core courses (see the SIUE Undergraduate catalog for specific requirements). An "APPLICATION FOR ADMISSION TO UPPER-DIVISION ENGINEERING COURSES" form must also be completed and approved. The form is available online at:

<a href="http://www.siue.edu/engineering/studentservices">http://www.siue.edu/engineering/studentservices</a> and in the Engineering Student Services Office.

#### SIUE - YEAR IV

FALL		SPRING	T
ECE 282 – Digital System Design	4	MRE 358 – Introduction to Mechatronics	3
ME 356 – Dynamic Systems Modeling	3	MRE 320 – Sensors and Actuators	3
ME 354 – Numerical Simulation	1	ME 450 – Automatic Control <sup>6</sup>	3
MRE 380 – Design of Machine Elements	3	ECE 381 – Microcontroller	3
Elective	3	PHIL 323 – Engr. Ethics and Professionalism (BHUM)	3
TOTAL	14	TOTAL	15

#### SILIE - YEAR V

FALL		SPRING	
MRE 454 – Robotics, Dynamics, & Control <sup>8</sup>	3	Technical Elective II	3
MRE 480 – Design in Mechatronics & Rob I	2	MRE 477 – Computer-Integ Manufacturing Sys	3
Technical Elective I	3	MRE 481 – Design in Mechatronics & Rob II	2
IE 345 – Engineering Economic Analysis	3	Interdisciplinary Studies (IS) (EGC) (EUSC)	3
Elective	3	Elective	3
TOTAL	14	TOTAL	14

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LIB 199 Information Navigation & Evaluation	1	MTH 115 introduction to Statistics MTH 150 Calculus w/ Analytic Geometry I (MATH 150)	4
MTH 120 Discrete Mathematics	3	COM 102 Public Speaking (ACS 103)	3
CHM 108 General Chemistry I w/lab (CHEM 121A/125A)	4	GOV 101 US & Missouri Constitution	1
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CIS 210 Object-Oriented Programming	4	MTH 250 Calculus w/ Analytic Geometry III (MATH 250)	4
MTH 151 Calculus w/ Analytic Geometry I (MATH 152)	4	MTH 288 Portfolio A	0
MTH 316 Non-Parametric Statistics	3	MTH 430 Algebraic Structures	3
ECN 210 Principles of Macroeconomics(ECON 111) or GER	3	BIO 108 Intro to Life Science w/Lab (BLS)	3
GER*	3	GER*	3
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BIO 203 Science & Society (MCII & Intensive Writing)	3	MTH 300 Modeling & Numerical Approximations	3
MTH 200 Linear Algebra	3	MTH 310 Differential Equations (MATH 305)	3
MTH 315 Advanced Statistics (STAT 380)	3	MTH 498 Senior Portfolio	1
ART 155 Art Appreciation (ART 111) (BFPA)	3	MTH 499 Senior Synthesis	3
PHY 218 Engineering Physics I w/lab (PHYS 141/151L)	4	PHY 220 Engineering Physics II w/lab (PHYS 142/152L)	4
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