

# Systems Engineering

Bachelor of Science in Systems Engineering

## DEGREE PLAN

### Common Core 36 Hours

#### **CORE CAPSTONE** **0**

SUBJ 9999	Course Title	0
-----------	--------------	---

#### **BIBLICAL LITERACY** **6**

BIBL 1013	Introduction to Christian Scripture	3
BIBL 1023	Christian Theology and Ethics	3

#### **COMPOSITION AND LITERATURE** **6**

ENGL 1153	English Composition: Exposition and Argument	3
ENGL 1163	English: Composition and Classical Literature	3

#### **SCIENTIFIC LITERACY AND MATHEMATICS** **8**

MATH 2013	Analytic Geometry/Calculus I	3
PHYS 2515	University Physics I	5

#### **WELLNESS AND LIFELONG FITNESS** **1**

PHED 1001	The Wellness Lifestyle	1
-----------	------------------------	---

#### **HISTORY AND LITERATURE** **12**

ENGL 2013	European Civilization: Literature	3
HIST 2013	European Civilization: History	3

ENGL 2023	Modern West: Literature	3
HIST 2023	Modern West: History	3

#### **PHILOSOPHY AND FINE ARTS — SELECT ONE COURSE** **3**

FNAR 2063	Arts and Western Culture	3
FNAR 2163	Arts and Ideas	3
PHIL 1043	Introduction to Philosophy	3

### Supportive Core 9 Hours

CHEM 1214	Engineering Chemistry	4
PHYS 2525	University Physics II	5

### Engineering 81 Hours

#### **DEGREE CORE** **54**

BSAD 2013	Technical Systems, Communication, & Project Management	3
CIS 2062	Engineering Graphics & Programming	2
CIS 3203	Logic Design	3
ENGR 1103	Engineering Innovation and Design Problem Solving	3
ENGR 2101	Entrepreneurial Mindset	1
ENGR 2313	Electrical Circuits	3
ENGR 2403	Statics	3
ENGR 2413	Dynamics	3
ENGR 2603	Aerodynamics	3
ENGR 3303	Control Systems	3
ENGR 3443	Thermodynamics	3
ENGR 4103	Engineering Decision, Risk Analysis, and Ethics	3
ENGR 4952	Engineering Capstone I	2
ENGR 4962	Engineering Capstone II	2
MATH 2023	Analytic Geometry and Calculus II	3
MATH 2033	Analytic Geometry and Calculus III	3
MATH 2043	Analytic Geometry and Calculus IV	3
MATH 3243	Differential Equations	3
MATH 3503	Computational Statistics	3

#### **SELECT ONE COURSE**

ENGR 3202	Lean Six Sigma Methods	2
ENGR 3902	Coop Work Experience	2

#### **SPECIALIZED COURSES** **27**

ENGR 3463	Strength of Materials	3
ENGR 3503	Engineering Systems Design	3
ENGR 3513	Systems Modeling and Simulation	3
ENGR 3523	Hardware-in-the-Loop Testing	3
ENGR 3533	Systems Requirements, Verification and Validation Testing	3
ENGR 3603	Introduction to Flight Principles	3
ENGR 3613	Aero Propulsion	3
ENGR 3623	Aero Systems Manufacturing	3
ENGR 3633	Tools for Aerospace Systems Engineering	3

### Total Hours

Common Core	36
Supportive Core	9
Major	81

**Total hours required for graduation 126**

No D's will be accepted in the area of concentration and the supportive courses or in courses comprising majors and minors.