

SUGGESTED THREE-YEAR GRADUATION PLAN



Aeronautics – Aeronautical Studies – Bachelor of Science

[AT-BS-AERN-AEST]

College of Applied Engineering, Sustainability and Technology

Catalog Year: 2013-2014

This roadmap is a recommended semester-by-semester plan of study for this major. However, courses and milestones designated as critical (in boldface and shaded areas) must be completed in the semester listed to ensure a timely graduation.

Course Subject and Title	Credit Hours	Upper Div.	Min. Grade	Major GPA	Important Notes
Post-Secondary Coursework or Credit By Examination Upon Entry as a Freshman: [31 Credit Hours]					
AERN 15000 Introduction to Aeronautics	3			■	
AERN 25250 Elements of Aviation Weather	3			■	
MATH 11010 Algebra for Calculus	3				Fulfills Kent Core Mathematics and Critical Reasoning
MATH 11022 Trigonometry	3				Fulfills Kent Core Additional
TECH 21021 Survey of Electricity and Electronics	4			■	
Kent Core Composition	6				See list of Kent Core courses that can be earned through AP, CLEP or CBE exams on page 3
Kent Core Social Sciences	6				
Kent Core Additional	3				
Semester One: [15 Credit Hours]					
PHY 13001 General College Physics I	4				Fulfills Kent Core Basic Sciences; both courses must be taken together
PHY 13021 General College Physics Laboratory I	1				
AERN 15745 Non-Pilot Elements of Flight Theory	3			■	
TECH 20002 Materials and Processes	3			■	
US 10097 Destination Kent State: First Year Experience	1				Not required for transfer students with 25 credits
Kent Core Requirement	3				See Kent Core Summary on page 2
Semester Two: [14 Credit Hours]					
PHY 13012 College Physics II	2				Fulfills Kent Core Basic Sciences; see note 1 on page 2
AERN 25350 Fundamentals of Air Traffic Control	2			■	Must be taken together
AERN 25351 Fundamentals of Air Traffic Control Laboratory	1			■	
COMM 15000 Introduction to Human Communication	3				Fulfills Kent Core Additional
AERN 35040 Aircraft Systems I	3	■		■	
AERN 35150 Aircraft Structures	3	■		■	Offered in spring only
Semester Three: [15 Credit Hours]					
AERN 35020 Aircraft Propulsion Systems	3	■		■	
AERN 35340 Airport Management	3	■		■	
AERN 45030 Aircraft Systems II	3	■		■	Fulfills writing-intensive requirement; see note 2 on page 2
TECH 31000 Cultural Dynamics of Technology	3	■		■	Fulfills writing-intensive and domestic diversity requirements; see note on page 2
Kent Core Requirement	3				See Kent Core Summary on page 2
Semester Four: [15 Credit Hours]					
AERN 35341 Air Transportation Systems	3	■		■	
AERN 45130 Physiology and Human Factors of Flight	3	■		■	
AERN 45135 Aviation Safety Theory	3	■		■	
AERN 45350 Avionics	3	■		■	
General Electives (lower or upper division)	3				
Semester Five: [15 Credit Hours]					
AERN 45150 Applied Flight Dynamics I	3	■		■	
AERN 45250 Aviation Law	3	■		■	
AERN 45791 Aviation Security and Policy Seminar	3	■		■	Fulfills writing-intensive requirement; see note 2 on page 2
General Electives (lower or upper division)	6				

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Critical requirements are boldface in shaded areas.

Course Subject and Title	Credit Hours	Upper Div.	Min. Grade	Major GPA	Important Notes
Semester Six: [16 Credit Hours]					
Note: All students must successfully complete the comprehensive exit exam requirement prior to graduation with the B.S. in Aeronautics.					
AERN 45099 Aeronautical Studies Capstone or AERN 45096 Aeronautical Internship/Cooperative Education	3	■	C	■	Fulfills experiential learning requirement
AERN 45291 Aerospace Senior Seminar	1	■		■	
General Electives (lower or upper division)	12				Number of credits required depends on meeting minimum 121 credit hours and 39 upper-division credit hours

Graduation Requirements Summary

Minimum Total Hours	Minimum Upper-Division Hours	Minimum Kent Core Hours	Global / Domestic Diversity Course	Writing-Intensive	Experiential Learning	Minimum Major GPA	Minimum Overall GPA
121	39	36	Kent Core or General Electives / TECH 3100	AERN 45030 or AERN 45791 or TECH 31000	AERN 45099	2.250	2.000

Kent Core Summary

Kent Core Categories	Important Notes	Remaining Credit Hours
Composition (6-8 credit hours) <i>ENG 11002, 11011, 21011; HONR 10197, 10297</i>	Enrollment based on placement test	6-8
Mathematics and Critical Reasoning (3-5 credit hours)	Fulfilled in this major with MATH 11010	0
Humanities and Fine Arts (9 credit hours) <i>Minimum one course from humanities in Arts and Sciences and minimum one course from fine arts</i>	May fulfill diversity requirement	9
Social Sciences (6 credit hours) <i>Must be selected from two curricular areas</i>	May fulfill diversity requirement	6
Basic Sciences (6-7 credit hours) <i>Must include one laboratory</i>	Fulfilled in this major with PHY 13001, PHY 13012 and PHY 13021	0
Additional (6 credit hours)	Fulfilled in this major with COMM 15000 and MATH 11022	0

Note 1: Students who successfully completed PHY 13002 will have met the requirement for PHY 13012.

Note 2: A minimum C grade must be earned in AERN 45030, AERN 45791 or TECH 31000 to fulfill the writing-intensive requirement.

Comprehensive Exit Exam: All students must successfully complete the comprehensive exit exam requirement prior to graduation with the B.S. in Aeronautics. Exit exam requirements are to be satisfied by all graduation candidates no later than the eighth week of the semester of intended graduation. The exit exams shall be offered during the fourth and eighth weeks of the fall and spring semesters. Students who fail will be allowed to retake the exit exams. An overall passing grade of 70 is required. Students who transfer into the aeronautics program and receive academic credit for core areas are still responsible for taking the exam in its entirety.

Kent Core

Students must complete a minimum 36 credit hours of the Kent Core. Certain courses required in programs and in student's major field may also fulfill the Kent Core. Honors equivalents shall satisfy the Kent Core. None of the courses on the Kent Core list may be taken with a pass/fail grade. Visit www.kent.edu/catalog/kent-core for course list.

Diversity Course Requirement

Students must complete a two-course diversity requirement, consisting of one with a domestic (U.S.) focus and one with a global focus. One course must come from the Kent Core. The second course may be taken as a second Kent Core, within a major or minor, or as a general elective; or, with dean's approval, by completing one semester of study in another country. Visit www.kent.edu/catalog/diversity for course list.

Writing-Intensive Course Requirement

Students must complete a one-course writing-intensive requirement in their major and earn minimum C (2.00) grade. Visit www.kent.edu/catalog/wic for course list.

Experiential Learning Requirement

To provide students with direct engagement in learning experiences that promote academic relevance, meaning and an understanding of real-world issues, students must complete this requirement at Kent State, either as a for-credit course or as a non-credit, non-course experience approved by the appropriate faculty member. Visit www.kent.edu/catalog/elr for course list.

Upper-Division Requirement

Students must complete a minimum 39 upper-division (numbered 30000 to 49999) credit hours of coursework. Programs in the College of Arts and Sciences require a minimum of 42 hours of upper-division coursework.

Kent Core Courses That Can Be Earned Through Exams

LEGEND: G – Global Diversity; D – Domestic Diversity; LAB – Laboratory

				Minimum AP score	Minimum CLEP score	Minimum CBE score
COMPOSITION						
ENG	11011	College Writing I (3)		3	50	C
ENG	21011	College Writing II (3)				C
MATHEMATICS AND CRITICAL REASONING						
CS	10051	Introduction to Computer Science (4)		3		
MATH	11010	Algebra for Calculus (3)			50	
MATH	11012	Intuitive Calculus (3)				C
MATH	12001	Algebra and Trigonometry (5)			50	C
MATH	12002	Analytic Geometry and Calculus I (5)		3	50	C
MATH	14001	Basic Mathematical Concepts I (4)				C
MATH	14002	Basic Mathematical Concepts II (4)				C
HUMANITIES AND FINE ARTS						
Humanities in Arts and Sciences						
ENG	22073	Major Modern Writers: British and United States (3)		3	50	
G HIST	11050	World History: Ancient and Medieval (3)		3		C
G HIST	11051	World History: Modern (3)		3		C
D HIST	12070	History of the United States: The Formative Period (3)		3	50	C
D HIST	12071	History of the United States: The Modern Period (3)		3	50	C
HIST	1xxxx	European History (3)		3		
Fine Arts						
ARCH	10012	Survey of Architectural History II (3)				C
ARTH	22006	Art History I: Ancient and Medieval Art (3)		3		
MUS	22111	The Understanding of Music (3)				C
G MUS	22121	Music as a World Phenomenon (3)				C
SOCIAL SCIENCES						
ECON	22060	Principles of Microeconomics (3)		3	50	C
ECON	22061	Principles of Macroeconomics (3)		3	50	C
GEOG	10160	Introduction to Geography (3)				C
G GEOG	17063	World Geography (3)				C
D GEOG	17064	Geography of the United States and Canada (3)				C
G GEOG	22061	Human Geography (3)		3		
G POL	10004	Comparative Politics (3)		3		
D POL	10100	American Politics (3)		3	50	
D PSYC	11762	General Psychology (3)		3	50	
D PSYC	20651	Child Psychology (3)			50	
D SOC	12050	Introduction to Sociology (3)			50	
BASIC SCIENCES						
BSCI	10001	Human Biology (3)				C
BSCI	10002	Life on Planet Earth (3)				C
BSCI	10110	Biological Diversity (4)		3	50	
BSCI	10120	Biological Foundations (4)		4	50	
LAB BSCI	11010	Anatomy and Physiology I for Allied Health (3)				C
LAB BSCI	11020	Anatomy and Physiology II for Allied Health (3)				C
BSCI	20020	Biological Structure and Function (5)				C
CHEM	10030	Chemistry in Our World (3)				C
CHEM	10050	Fundamentals of Chemistry (3)				C
CHEM	10052	Introduction to Organic Chemistry (2)				C
CHEM	10054	General and Elementary Organic Chemistry (5)				C
CHEM	10060	General Chemistry I (4)		3	50	C
CHEM	10061	General Chemistry II (4)		5	50	C
LAB CHEM	10062	General Chemistry I Laboratory (1)		4		
GEOL	11040	Earth Dynamics (3)				C
GEOL	11042	Earth History (3)				C
GEOL	21062	Environmental Geology (3)		3		C
GEOL	21080	Oceanography (3)				C
PHY	11030	Seven Ideas that Shook the Universe (3)				C
PHY	12201	Technical Physics I (3)				C
PHY	12202	Technical Physics II (3)				C
PHY	13001	General College Physics I (4)		3		C
PHY	13002	General College Physics II (4)		3		C
PHY	13011	College Physics I (2)				C
PHY	13012	College Physics II (2)				C
LAB PHY	13021	General College Physics Laboratory I (1)		3		
LAB PHY	13022	General College Physics Laboratory II (1)		3		
PHY	21040	Physics in Entertainment and the Arts (3)				C
PHY	21430	Frontiers in Astronomy (3)				C
PHY	23101	General University Physics I (5)		3		C
PHY	23102	General University Physics II (5)		3		C

Visit the following websites for more information on the AP (www.kent.edu/honors/academicsandresearch/advanced-placement.cfm); CLEP (www.kent.edu/career/testing/clep.cfm); and CBE (www.kent.edu/registrar/info/cbe.cfm) at Kent State. Visit www.kent.edu/catalog/kent-core for the full Kent Core course list.

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