KENT STATE UNIVERSITY

Roadmap: Aeronautics- Air Traffic Control - Bachelor of Science
[AT-BS-AERN-ATC]
College of Applied Engineering, Sustainability and Technology
Catalog Year: 2012-2013

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
Semester One: [15 Credit Hours]					
AERN 15000 Introduction to Aeronautics	**3**			■	
AERN 15250 FAA Orientation	**3**			■	
AERN 15740 Elements of Flight Theory	**5**			■	
MATH 11010 Algebra for Calculus	3				Fulfills Kent Core Mathematics and Critical Reasoning
US 10097 Destination Kent State: First Year Experience	1				
Semester Two: [18 Credit Hours]					
AERN 25350 Fundamentals of Air Traffic Control	**2**			■	**Must be taken together**
AERN 25351 Fundamentals of Air Traffic Control Laboratory	**1**			■	
MATH 11022 Trigonometry	3				Fulfills Kent Core Additional
TECH 13580 Engineering Graphics I	3				
TECH 20002 Materials and Processes	3				
Kent Core Requirement	3				See Kent Core Summary on page 2
Kent Core Requirement	3				
Semester Three: [16 Credit Hours]					
AERN 25250 Elements of Aviation Weather	3			■	
COMM 15000 Introduction to Human Communication	3				Fulfills Kent Core Additional
MIS 24163 Principles of Management	3				
PHY 13011 College Physics I	2				Fulfills Kent Core Basic Sciences; courses must be taken together; PHY 13011 see note 1 on page 2
PHY 13021 General College Physics I Laboratory	1				
TECH 21021 Survey of Electricity and Electronics	4				
Semester Four: [15 Credit Hours]					
AERN 35342 Terminal Operations I	**2**	■		■	**Offered in spring only**
AERN 35345 Terminal Operations I Laboratory	**1**	■		■	
AERN 35340 Airport Management	3	■		■	
PHY 13012 College Physics II	2				Fulfills Kent Core Basic Sciences; courses must be taken together; PHY 13012 see note 1 on page 2
PHY 13022 General College Physics II Laboratory	1				
Kent Core Requirements	3				See Kent Core Summary on page 2
Kent Core Requirements	3				
Semester Five: [15 Credit Hours]					
AERN 35040 Aircraft Systems I	**3**	■		■	
AERN 45320 Terminal Operations II	**2**	■		■	**Courses must be taken together; offered in fall only**
AERN 45321 Terminal Operations II Laboratory	**1**	■		■	
AERN 35644 Instrument Flight Theory	3	■		■	
TECH 31000 Cultural Dynamics of Technology	3	■		■	Fulfills writing-intensive requirement; fulfills domestic diversity requirement; see note 2 on page 2
Kent Core Requirement	3				See Kent Core Summary on page 2
Semester Six: [15 Credit Hours]					
AERN 35343 En Route I	**3**	■		■	**Offered in spring only**
AERN 45030 Aircraft Systems II	3	■		■	Fulfills writing-intensive requirement; see note 2 on page 2
AERN 45150 Applied Flight Dynamics I	3	■		■	
AERN 45250 Aviation Law	3	■		■	
Kent Core Requirement	3				See Kent Core Summary on page 2

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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 Seven: [15 Credit Hours]					
AERN 45343 En Route II	**2**	■		■	**Must be taken together; offered in fall only**
AERN 45344 En Route II Laboratory	**1**	■		■	
AERN 45350 Avionics	3	■		■	Offered in fall only
AERN 45791 Aviation Security and Policy Seminar	3	■		■	Fulfills writing-intensive requirement; see note below
Kent Core Requirement	3				See Kent Core Summary on page below
General Elective	3				
Semester Eight: [15 Credit Hours]					
All students must successfully complete the comprehensive exit exam requirement prior to graduation with the B.S. in Aeronautics.					
AERN 45130 Physiology and Human Factors of Flight	3	■		■	
AERN 45135 Aviation Safety Theory	3	■		■	
AERN 45291 Aerospace Senior Seminar	1	■		■	
AERN 45300 Air Traffic Control Capstone	3	■		■	
General Elective	5				Number of credits required depends on meeting minimum 125 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	Overall GPA
124	39	36	TECH 31000 DD/Kent Core or General electives	AERN 45030, AERN 45791, TECH 31000	Visit kent.edu/catalog/elr	2.250	2.000

Kent Core Summary

Kent Core Categories	Important Notes	Remaining Credit Hours
Composition (6-8 credit hours) *ENG 11002, 11011, 21011; HONR 10197, 10297*	Enrollment based on placement test	6-8
Mathematics and Critical Reasoning (3-5 credit hours)	Fulfilled in the major with MATH 11010	0
Humanities and Fine Arts (9 credit hours) *Minimum one course from humanities in Arts and Sciences and minimum one course from fine arts*	May fulfill diversity requirement	9
Social Sciences (6 credit hours) *Must be selected from two curricular areas*	May fulfill diversity requirement	6
Basic Sciences (6-7 credit hours) *Must include one laboratory*	Fulfilled in this major with PHY 13011, PHY 13012, PHY 13021, PHY 13022	0
Additional (6 credit hours) *Must be selected from two Kent Core categories*	Fulfilled in this major with COMM 15000 and MATH 11022	0

Note 2: Students who successfully completed PHY 13001 and PHY 13002 will have met the requirement for PHY 13011 and PHY 13012.

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

Comprehensive Exit Exam: 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.

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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.