AERONAUTICS - B.S.

College of Aeronautics and Engineering
www.kent.edu/cae

Contact Information

- cae@kent.edu | 330-672-2892
- Speak with an Advisor
- Chat with an Admissions Counselor

Fully Offered

- Kent Campus

Examples of Possible Careers*

Air traffic controllers

- 0.5% little or no change
- 24,300 number of jobs
- $130,420 potential earnings

Airfield operations specialists

- 6.1% faster than the average
- 10,900 number of jobs
- $51,330 potential earnings

Airline pilots, copilots, and flight engineers

- 2.8% slower than the average
- 85,500 number of jobs
- $160,970 potential earnings

Commercial pilots

- 9.1% much faster than the average
- 41,600 number of jobs
- $93,300 potential earnings

Transportation, storage, and distribution managers

- 3.5% about as fast as the average
- 139,400 number of jobs
- $96,390 potential earnings

***Note**
Source of occupation titles and labor data is from the U.S. Bureau of Labor Statistics' Occupational Outlook Handbook. Data comprises projected percent change in employment over the next 10 years; nation-wide employment numbers; and the yearly median wage at which half of the workers in the occupation earned more than that amount and half earned less.

Description

The Bachelor of Science degree in Aeronautics provides an education in aviation that produces professionals to operate the National Airspace System in the 21st century.

The Aeronautics major comprises the following concentrations:

- The **Aeronautical Studies** concentration prepares students for entry-level technological positions in aviation and related areas. Although focused on a broad foundation of aeronautically related subjects, the program also provides a significant number of electives that allow students to explore other areas of interest or earn a minor in a particular area of study. It is well suited for those entering the program with previous flight experience or transfer credits from an accredited university.
- The **Air Traffic Control** concentration prepares students for professional work in air traffic control and management. Originally, as part of the Federal Aviation Administration's Air Traffic—Collegiate Training Initiative (CTI), the concentration provides practical simulation-based training in air traffic control that enables the CTI graduates to work as air traffic controllers and managers in the National Airspace System.
- The **Aviation Management** concentration prepares students for entry-level management supervisory and administrative positions in aviation and other aviation-related professional fields. This course of study combines technical and aeronautical courses with courses in management and information systems. Students entering this program should have a technical interest, mathematical proficiency and an ability to develop analytical and communicative capabilities.
- The **Professional Pilot** concentration is designed for students who aspire to become professional pilots. This concentration stresses subjects associated with flight systems, propulsion, structures and electronics. Students entering this program should have a strong desire for excellence in aviation as well as the flying skills required of a professional pilot.
- The **Unmanned Aircraft Systems Flight Operations** concentration is for students who aspire to become professional Unmanned aircraft pilots (drone pilot). This concentration is focused on the safe operations of unmanned aircraft systems, regulations, the technology of autonomous systems and policy regarding the operations of unmanned aerial elements.

Accreditation

The B.S. degree in Aeronautics is accredited by the Aviation Accreditation Board International, Federal Aviation Administration.

Admission Requirements

The university affirmatively strives to provide educational opportunities and access to students with varied backgrounds, those with special talents and adult students who graduated from high school three or more years ago.

Freshman Students on the Kent Campus: The freshman admission policy on the Kent Campus is selective. Admission decisions are based upon the following: cumulative grade point average, ACT and/or SAT scores, strength of high school college preparatory curriculum and grade trends. The Admissions Office at the Kent Campus may defer the admission of students who do not meet admissions criteria but who demonstrate areas of promise for successful college study. Deferred applicants may begin their college coursework at one of seven regional campuses of Kent State University. For more information on admissions, including additional requirements for some academic programs, visit the admissions website for first-year students.

Freshman Students on the Regional Campuses: Kent State campuses at Ashtabula, East Liverpool, Geauga, Salem, Stark, Trumbull and Tuscarawas, as well as the Twinsburg Academic Center, have open

enrollment admission for students who hold a high school diploma, GED or equivalent.

English Language Proficiency Requirements for International Students: All international students must provide proof of English language proficiency (unless they meet specific exceptions) by earning a minimum 525 TOEFL score (71 on the Internet-based version), minimum 75 MELAB score, minimum 6.0 IELTS score, minimum 48 PTE score or minimum 100 DET score; or by completing the ESL level 112 Intensive Program. For more information on international admission, visit the Office of Global Education's admission website.

Transfer, Transitioning and Former Students: For more information about admission criteria for transfer, transitioning and former students, please visit the admissions website.

Transfer students must have a minimum 2.250 overall GPA in all college-level coursework for admission to the Aeronautics major.

Flight Training Courses: Transfer students and students admitted to the Aeronautics major with credits completed through College Credit Plus or other means may be allowed to enroll in flight training courses only with special permission from the academic program director.

Program Learning Outcomes

Graduates of this program will be able to:

1. Apply knowledge of math, science and the applied sciences to aviation-related disciplines.
2. Analyze and interpret data.
3. Understand and master the fundamental concepts and skills of airplane flight.
4. Communicate effectively through written and oral means.
5. Recognize the need and develop the cognitive abilities to engage in life-long learning by successfully contending with changing technologies, regulatory policies and procedures, market forces and the highly dynamic operational environment of commercial flight and professional aviation.
6. Understand contemporary issues that affect aviation.
7. Use the techniques, skills and modern technology necessary for professional practice.
8. Understand the national and international aviation environment.
9. Apply pertinent knowledge in identifying and solving problems.
10. Know and understand the technical details involved in the effective management of employees and operational systems in professional aviation.

University Requirements

All students in a bachelor's degree program at Kent State University must complete the following university requirements for graduation.

NOTE: University requirements may be fulfilled in this program by specific course requirements. Please see Program Requirements for details.

Destination Kent State: First Year Experience	1
Course is not required for students with 25 transfer credits, excluding College Credit Plus, or age 21+ at time of admission.	
Diversity Domestic/Global (DIVD/DIVG)	2 courses
Students must successfully complete one domestic and one global course, of which one must be from the Kent Core.	
Experiential Learning Requirement (ELR)	varies
Students must successfully complete one course or approved experience.	
Kent Core (see table below)	36-37
Writing-Intensive Course (WIC)	1 course
Students must earn a minimum C grade in the course.	
Upper-Division Requirement	39 (or 42)
Students must successfully complete 39 upper-division (numbered 30000 to 49999) credit hours to graduate. Students in a B.A. and/or B.S. degree in the College of Arts and Sciences must complete 42 upper-division credit hours.	
Total Credit Hour Requirement	120
Some bachelor's degrees require students to complete more than 120 credit hours.	

Kent Core Requirements

Kent Core Composition (KCMP)	6
Kent Core Mathematics and Critical Reasoning (KMCR)	3
Kent Core Humanities and Fine Arts (KHUM/KFA) (min one course each)	9
Kent Core Social Sciences (KSS) (must be from two disciplines)	6
Kent Core Basic Sciences (KBS/KLAB) (must include one laboratory)	6-7
Kent Core Additional (KADL)	6
Total Credit Hours:	**36-37**

Program Requirements

Major Requirements

Code	Title	Credit Hours
Major Requirements (courses count in major GPA)		
AERN 15000	INTRODUCTION TO AERONAUTICS	3
AERN 25100	INTRODUCTION TO AVIATION MANAGEMENT	3
AERN 25250	ELEMENTS OF AVIATION WEATHER	3
AERN 25350	FUNDAMENTALS OF AIR TRAFFIC CONTROL	2
AERN 25351	FUNDAMENTALS OF AIR TRAFFIC CONTROL LABORATORY	1
AERN 30000	PROFESSIONAL DEVELOPMENT IN AERONAUTICS	1
AERN 45130	PHYSIOLOGY AND HUMAN FACTORS OF FLIGHT	3
AERN 45135	AVIATION SAFETY THEORY	3
AERN 45150	APPLIED FLIGHT DYNAMICS I	3
AERN 45250	AVIATION LAW	3
AERN 45791	AVIATION SECURITY AND POLICY SEMINAR (WIC)	3
Additional Requirements (courses do not count in major GPA)		
COMM 15000	INTRODUCTION TO HUMAN COMMUNICATION (KADL)	3
MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	3
MATH 11022	TRIGONOMETRY (KMCR)	3
PHY 13001	GENERAL COLLEGE PHYSICS I (KBS)	4
PHY 13021	GENERAL COLLEGE PHYSICS LABORATORY I (KBS) (KLAB)	1
UC 10097	DESTINATION KENT STATE: FIRST YEAR EXPERIENCE	1
Kent Core Composition		6
Kent Core Humanities and Fine Arts (minimum one course from each)		9
Kent Core Social Sciences (must be from two disciplines)		3

Concentrations	
Choose from the following:	59
Aeronautical Studies	
Air Traffic Control	
Aviation Management	
Professional Pilot	
Unmanned Aircraft Systems Flight Operations	
Minimum Total Credit Hours:	120

Aeronautical Studies Concentration Requirements

Code	Title	Credit Hours
Concentration Requirements (courses count in major GPA)		
AERN 15745	NON-PILOT ELEMENTS OF FLIGHT THEORY	3
AERN 35020	AIRCRAFT PROPULSION SYSTEMS	3
AERN 35040	AIRCRAFT SYSTEMS I	3
AERN 35150	AIRCRAFT STRUCTURES	3
AERN 35341	AIR TRANSPORTATION SYSTEMS	3
AERN 45030	AIRCRAFT SYSTEMS II	3
CAE 45092	AERONAUTICS AND ENGINEERING INTERNSHIP/COOPERATIVE EDUCATION (ELR)	3
or AERN 45099	AERONAUTICAL STUDIES CAPSTONE (ELR)	
ENGR 20002	MATERIALS AND PROCESSES	3
Aeronautics (AERN) Upper-Division Electives (30000 or 40000 level)		3
Additional Requirements (courses do not count in major GPA)		
PHY 13012	COLLEGE PHYSICS II (KBS)	2
Kent Core Social Sciences (must be from two disciplines)		3
General Electives (total credit hours depends on earning 120 credit hours, including 39 upper-division credit hours)		27
Minimum Total Credit Hours:		59

Air Traffic Control Concentration Requirements

Code	Title	Credit Hours
Concentration Requirements (courses count in major GPA)		
AERN 15250	FAA ORIENTATION	3
AERN 15745	NON-PILOT ELEMENTS OF FLIGHT THEORY	3
AERN 25252	THUNDERSTORMS AND SEVERE WEATHER	3
AERN 35040	AIRCRAFT SYSTEMS I	3
AERN 35342	TERMINAL OPERATIONS I	2
AERN 35343	EN ROUTE I	3
AERN 35345	TERMINAL OPERATIONS I LABORATORY	1
AERN 35650	NON-PILOT INSTRUMENT FLIGHT THEORY	3
AERN 45030	AIRCRAFT SYSTEMS II	3
AERN 45320	TERMINAL OPERATIONS II	2
AERN 45321	TERMINAL OPERATIONS II LABORATORY	1
AERN 45343	EN ROUTE II	2
AERN 45344	EN ROUTE II LABORATORY	1
AERN 45399	AIR TRAFFIC CONTROL CAPSTONE (ELR)	1
AERN 45499	AIR TRAFFIC CONTROL CAPSTONE LABORATORY (ELR)	2
MGMT 24163	PRINCIPLES OF MANAGEMENT	3
Aeronautics (AERN) Electives		3
Additional Requirements (courses do not count in major GPA)		
PHY 13012	COLLEGE PHYSICS II (KBS)	2
PHY 13022	GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)	1
Kent Core Social Sciences (must be from two disciplines)		3
General Electives (total credit hours depends on earning 120 credit hours, including 39 upper-division credit hours)		14
Minimum Total Credit Hours:		59

Aviation Management Concentration Requirements

Code	Title	Credit Hours
Concentration Requirements (courses count in major GPA)		
ACCT 23020	INTRODUCTION TO FINANCIAL ACCOUNTING	3
AERN 15745	NON-PILOT ELEMENTS OF FLIGHT THEORY	3
AERN 35031	AIR TRANSPORTATION INDUSTRY REGULATIONS	3
AERN 35339	FIXED BASE OPERATOR OPERATIONS	3
AERN 35340	AIRPORT MANAGEMENT	3
AERN 35341	AIR TRANSPORTATION SYSTEMS	3
AERN 45040	LABOR RELATIONS IN THE AVIATION INDUSTRY	3
AERN 45100	AIRPORT OPERATIONS	3
AERN 45200	STRATEGIC AVIATION MANAGEMENT (ELR)	3
COMM 20001	INTERPERSONAL COMMUNICATION	3
ENGR 13585	COMPUTER AIDED ENGINEERING GRAPHICS	3
FIN 36053	BUSINESS FINANCE	3
HRM 34180	HUMAN RESOURCE MANAGEMENT	3
MGMT 24163	PRINCIPLES OF MANAGEMENT	3
MKTG 25010	PRINCIPLES OF MARKETING	3
Additional Requirements (courses do not count in major GPA)		
ECON 22060	PRINCIPLES OF MICROECONOMICS (KSS)	3
ECON 22061	PRINCIPLES OF MACROECONOMICS (KSS)	3
Kent Core Basic Science		2
General Electives (total credit hours depends on earning 120 credit hours, including 39 upper-division credit hours)		6
Minimum Total Credit Hours:		59

Professional Pilot Concentration Requirements

Code	Title	Credit Hours
Concentration Requirements (courses count in major GPA)		
AERN 15740	ELEMENTS OF FLIGHT THEORY	5
AERN 15741	PRIVATE PILOT FLIGHT	5
AERN 25743	COMMERCIAL PILOT FLIGHT I	2
AERN 35150	AIRCRAFT STRUCTURES	3
or AERN 45730	APPLIED TRANSPORT CATEGORY AIRCRAFT SYSTEMS	
or AERN 45740	FLIGHT MANAGEMENT SYSTEMS	
AERN 35020	AIRCRAFT PROPULSION SYSTEMS	3
AERN 35040	AIRCRAFT SYSTEMS I	3
AERN 35644	INSTRUMENT FLIGHT THEORY	3
AERN 35645	INSTRUMENT PILOT FLIGHT	2
AERN 35647	COMMERCIAL PILOT FLIGHT II	2
AERN 35746	COMMERCIAL PILOT THEORY	2
AERN 35747	COMMERCIAL PILOT FLIGHT III	2
AERN 45030	AIRCRAFT SYSTEMS II	3
AERN 45648	THEORY OF FLIGHT INSTRUCTION (ELR)	3
AERN 45649	FLIGHT INSTRUCTOR/AIRPLANES	2
AERN 45651	FLIGHT INSTRUCTOR-INSTRUMENTS	2
AERN 45653	MULTI-ENGINE PILOT FLIGHT	1
AERN 45710	TURBINE ENGINE THEORY AND OPERATION	2

AERN 45720	CREW RESOURCE MANAGEMENT	2
AERN 45721	CREW RESOURCE MANAGEMENT LABORATORY	1
Aeronautics (AERN) Electives		3
Additional Requirements (courses do not count in major GPA)		
PHY 13012	COLLEGE PHYSICS II (KBS)	2
PHY 13022	GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)	1
Kent Core Social Sciences (must be from two disciplines)		3
General Electives (total credit hours depends on earning 120 credit hours, including 39 upper-division credit hours)		2
Minimum Total Credit Hours:		59

Unmanned Aircraft Systems Flight Operations Concentration

Code	Title	Credit Hours
Concentration Requirements (courses count in major GPA)		
AERN 15740	ELEMENTS OF FLIGHT THEORY	5
AERN 15741	PRIVATE PILOT FLIGHT	5
AERN 25800	INTRODUCTION TO UNMANNED AIRCRAFT SYSTEMS	3
AERN 35020	AIRCRAFT PROPULSION SYSTEMS	3
AERN 35040	AIRCRAFT SYSTEMS I	3
AERN 35250	UNMANNED AIRCRAFT SYSTEMS LAW AND REGULATIONS	2
AERN 35650	NON-PILOT INSTRUMENT FLIGHT THEORY	3
AERN 35810	UNMANNED AIRCRAFT SYSTEMS	3
AERN 35830	UNMANNED AIRCRAFT SYSTEMS SENSING AND SENSOR SYSTEMS	3
AERN 35840	UNMANNED AIRCRAFT SYSTEMS COMMAND, CONTROL AND COMMUNICATIONS	3
AERN 35892	SMALL UNMANNED AIRCRAFT SYSTEMS FLIGHT PRACTICUM (ELR)	2
AERN 45030	AIRCRAFT SYSTEMS II	3
AERN 45150	APPLIED FLIGHT DYNAMICS I	3
AERN 45800	UNMANNED AIRCRAFT SYSTEMS FLIGHT OPERATIONS THEORY	4
AERN 45892	UNMANNED AIRCRAFT SYSTEMS FLIGHT PRACTICUM (ELR)	2
Aeronautics (AERN) Elective		3
Additional Requirements (courses do not count in major GPA)		
PHY 13012	COLLEGE PHYSICS II (KBS) [1]	2
PHY 13022	GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)	1
Kent Core Social Sciences (must be from two disciplines)		3
Kent Core Additional		3
Minimum Total Credit Hours:		59

[1] Students who successfully completed PHY 13002 will have met the requirement for PHY 13012.

Progression Requirements

Professional Pilot concentration: Students must pass all required flight training and associated flight theory courses with a minimum 70 grade. Failure to complete all requirements may result in students being deemed not being permitted to continue in the concentration; those students will be advised to change their program to the Aeronautical Studies concentration with the Flight Technology minor.

Flight Training Courses: Beyond AERN 15741, all students are required to have an maintain a minimum 2.500 overall GPA to continue in flight courses. Students must complete all flight courses by the end of the semester following that in which they enrolled. In other words, if a student enrolls in a flight course in the fall, they must complete the course no later than the end of the following spring semester. This requirement is subject to waiver by the academic program director. In the absence of an authorized waiver, students who fail to complete any flight course by the end of the subsequent semester after course enrollment will receive a failing grade (F) and a complete forfeiture of the balance of the flight fees. Students who wish a refund of flight fees are required to withdraw from their flight course by the withdrawal deadlines established by the Office of the University Registrar. Flight fees will be refunded in accordance with the University policy regarding student fee refunds, policy number 3342-7-06. Students must complete the commercial certificate and instrument rating at Kent State to be eligible for the FAA's R-ATP certificate.

Graduation Requirements

Minimum Major GPA	Minimum Overall GPA
2.500*	2.000*

*Minimum major and overall GPA required for each concentration:

- Minimum 2.250 major GPA and 2.000 overall GPA for Aeronautical Studies concentration
- Minimum 2.500 major GPA and 2.500 overall GPA for Air Traffic Control and Aviation Management concentrations
- Minimum 2.500 major GPA and 2.500 overall GPA for Professional Pilot concentration
- Flight courses can be repeated once with permission

Roadmaps

- Aeronautical Studies Concentration
- Air Traffic Control Concentration
- Aviation Management Concentration
- Professional Pilot Concentration
- Unmanned Aircraft Systems Flight Operations Concentration

Aeronautical Studies Concentration

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

	Course	Title	Credits
	Semester One		
	AERN 15000	INTRODUCTION TO AERONAUTICS	3
	AERN 15745	NON-PILOT ELEMENTS OF FLIGHT THEORY	3
!	MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	3
	UC 10097	DESTINATION KENT STATE: FIRST YEAR EXPERIENCE	1
	Kent Core Requirement		3
	Kent Core Requirement		3
		Credit Hours	16
	Semester Two		
	AERN 25250	ELEMENTS OF AVIATION WEATHER	3
	AERN 25350	FUNDAMENTALS OF AIR TRAFFIC CONTROL	2
	AERN 25351	FUNDAMENTALS OF AIR TRAFFIC CONTROL LABORATORY	1
	COMM 15000	INTRODUCTION TO HUMAN COMMUNICATION (KADL)	3
	ENGR 20002	MATERIALS AND PROCESSES	3
!	MATH 11022	TRIGONOMETRY (KMCR)	3
		Credit Hours	15
	Semester Three		
	ENGR 20000	PROFESSIONAL DEVELOPMENT IN ENGINEERING	1
	ENGR 31000	CULTURAL DYNAMICS TECHNOLOGY (DIVD) (WIC)	3
!	PHY 13001	GENERAL COLLEGE PHYSICS I (KBS)	4
!	PHY 13021	GENERAL COLLEGE PHYSICS LABORATORY I (KBS) (KLAB)	1
	Kent Core Requirement		3
	Kent Core Requirement		3
		Credit Hours	15
	Semester Four		
	AERN 25100	INTRODUCTION TO AVIATION MANAGEMENT	3
	AERN 35150	AIRCRAFT STRUCTURES	3
!	PHY 13012	COLLEGE PHYSICS II (KBS)	2
	Kent Core Requirement		3
	Kent Core Requirement		3
		Credit Hours	14
	Semester Five		
	AERN 35020	AIRCRAFT PROPULSION SYSTEMS	3
	AERN 35040	AIRCRAFT SYSTEMS I	3
	ENGR 21020	SURVEY OF ELECTRICITY AND ELECTRONICS	3
	ENGR 21022	SURVEY OF ELECTRICITY AND ELECTRONICS LABORATORY	1
	Kent Core Requirement		3
	General Electives		3
		Credit Hours	16
	Semester Six		
	AERN 30000	PROFESSIONAL DEVELOPMENT IN AERONAUTICS	1
	AERN 35341	AIR TRANSPORTATION SYSTEMS	3
	AERN 45030	AIRCRAFT SYSTEMS II	3
	AERN 45130	PHYSIOLOGY AND HUMAN FACTORS OF FLIGHT	3
	Aeronautics (AERN) Upper-Division Electives (30000 or 40000 level)		3
		Credit Hours	13
	Semester Seven		
	AERN 45150	APPLIED FLIGHT DYNAMICS I	3
	AERN 45099 or CAE 45092	AERONAUTICAL STUDIES CAPSTONE (ELR) or AERONAUTICS AND ENGINEERING INTERNSHIP/COOPERATIVE EDUCATION (ELR)	3
	AERN 45250	AVIATION LAW	3
	General Electives		7
		Credit Hours	16
	Semester Eight		
	AERN 45135	AVIATION SAFETY THEORY	3
	AERN 45360	PROFESSIONAL DEVELOPMENT IN AERONAUTICS III	1
	AERN 45791	AVIATION SECURITY AND POLICY SEMINAR (WIC)	3
	General Electives		8
		Credit Hours	15
		Minimum Total Credit Hours:	120

Air Traffic Control Concentration

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

	Course	Title	Credits
	Semester One		
!	AERN 15000	INTRODUCTION TO AERONAUTICS	3
	AERN 15250	FAA ORIENTATION	3
	AERN 15745	NON-PILOT ELEMENTS OF FLIGHT THEORY	3
	AERN 25350	FUNDAMENTALS OF AIR TRAFFIC CONTROL	2
	AERN 25351	FUNDAMENTALS OF AIR TRAFFIC CONTROL LABORATORY	1
	MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	3
	UC 10097	DESTINATION KENT STATE: FIRST YEAR EXPERIENCE	1
		Credit Hours	16
	Semester Two		
	COMM 15000	INTRODUCTION TO HUMAN COMMUNICATION (KADL)	3
	MATH 11022	TRIGONOMETRY (KMCR)	3
	Aeronautics (AERN) Elective		3
	Kent Core Requirement		3
	Kent Core Requirement		3
		Credit Hours	15
	Semester Three		
	AERN 25250	ELEMENTS OF AVIATION WEATHER	3
	AERN 35342	TERMINAL OPERATIONS I	2
	AERN 35345	TERMINAL OPERATIONS I LABORATORY	1
	MGMT 24163	PRINCIPLES OF MANAGEMENT	3
	PHY 13001	GENERAL COLLEGE PHYSICS I (KBS)	4
	PHY 13021	GENERAL COLLEGE PHYSICS LABORATORY I (KBS) (KLAB)	1
		Credit Hours	14
	Semester Four		
	AERN 25252	THUNDERSTORMS AND SEVERE WEATHER	3
	AERN 45320	TERMINAL OPERATIONS II	2
	AERN 45321	TERMINAL OPERATIONS II LABORATORY	1
	PHY 13012	COLLEGE PHYSICS II (KBS)	2
	PHY 13022	GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)	1
	Kent Core Requirement		3
	Kent Core Requirement		3
		Credit Hours	15
	Semester Five		
	AERN 25100	INTRODUCTION TO AVIATION MANAGEMENT	3
	AERN 35040	AIRCRAFT SYSTEMS I	3
	AERN 35650	NON-PILOT INSTRUMENT FLIGHT THEORY	3
	Kent Core Requirement		3
	General Electives		5
		Credit Hours	17
	Semester Six		
	AERN 35343	EN ROUTE I	3
	AERN 45150	APPLIED FLIGHT DYNAMICS I	3
	AERN 45250	AVIATION LAW	3
	Aeronautics (AERN) Electives		3
	Kent Core Requirement		3
		Credit Hours	15
	Semester Seven		
	AERN 45130	PHYSIOLOGY AND HUMAN FACTORS OF FLIGHT	3
	AERN 45135	AVIATION SAFETY THEORY	3
!	AERN 45343	EN ROUTE II	2
!	AERN 45344	EN ROUTE II LABORATORY	1
	AERN 45360	PROFESSIONAL DEVELOPMENT IN AERONAUTICS III	1
	AERN 45791	AVIATION SECURITY AND POLICY SEMINAR (WIC)	3
		Credit Hours	13
	Semester Eight		
	AERN 45030	AIRCRAFT SYSTEMS II	3
	AERN 45399	AIR TRAFFIC CONTROL CAPSTONE (ELR)	1
	AERN 45499	AIR TRAFFIC CONTROL CAPSTONE LABORATORY (ELR)	2
	Kent Core Requirement		3
	General Electives		6
		Credit Hours	15
		Minimum Total Credit Hours:	120

Aviation Management Concentration

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

	Course	Title	Credits
	Semester One		
!	AERN 15000	INTRODUCTION TO AERONAUTICS	3
!	AERN 15745	NON-PILOT ELEMENTS OF FLIGHT THEORY	3
!	MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	3
	UC 10097	DESTINATION KENT STATE: FIRST YEAR EXPERIENCE	1
	Kent Core Requirement		3
	Kent Core Requirement		3
		Credit Hours	16
	Semester Two		
	AERN 25100	INTRODUCTION TO AVIATION MANAGEMENT	3
	AERN 25350	FUNDAMENTALS OF AIR TRAFFIC CONTROL	2
	AERN 25351	FUNDAMENTALS OF AIR TRAFFIC CONTROL LABORATORY	1
	ENGR 13585	COMPUTER AIDED ENGINEERING GRAPHICS	3
	MATH 11022	TRIGONOMETRY (KMCR)	3
	Kent Core Requirement		3
		Credit Hours	15
	Semester Three		
	AERN 25250	ELEMENTS OF AVIATION WEATHER	3
	ECON 22060	PRINCIPLES OF MICROECONOMICS (KSS)	3
	PHY 13001	GENERAL COLLEGE PHYSICS I (KBS)	4
	PHY 13021	GENERAL COLLEGE PHYSICS LABORATORY I (KBS) (KLAB)	1
	Kent Core Requirement		3
		Credit Hours	14
	Semester Four		
	ACCT 23020	INTRODUCTION TO FINANCIAL ACCOUNTING	3
	AERN 35340	AIRPORT MANAGEMENT	3
	COMM 15000	INTRODUCTION TO HUMAN COMMUNICATION (KADL)	3
	ECON 22061	PRINCIPLES OF MACROECONOMICS (KSS)	3
	MGMT 24163	PRINCIPLES OF MANAGEMENT	3
		Credit Hours	15
	Semester Five		
	AERN 30000	PROFESSIONAL DEVELOPMENT IN AERONAUTICS	1
	AERN 35339	FIXED BASE OPERATOR OPERATIONS	3
	AERN 35341	AIR TRANSPORTATION SYSTEMS	3
	HRM 34180	HUMAN RESOURCE MANAGEMENT	3
	MKTG 25010	PRINCIPLES OF MARKETING	3
	Kent Core Requirement		3
		Credit Hours	16
	Semester Six		
	AERN 35031	AIR TRANSPORTATION INDUSTRY REGULATIONS	3
!	AERN 45150	APPLIED FLIGHT DYNAMICS I	3
!	AERN 45250	AVIATION LAW	3
	COMM 20001	INTERPERSONAL COMMUNICATION	3
	Kent Core Requirement		3
		Credit Hours	15
	Semester Seven		
	AERN 45100	AIRPORT OPERATIONS	3
	AERN 45130	PHYSIOLOGY AND HUMAN FACTORS OF FLIGHT	3
	AERN 45135	AVIATION SAFETY THEORY	3
!	AERN 45791	AVIATION SECURITY AND POLICY SEMINAR (WIC)	3
	Kent Core Requirement		3
		Credit Hours	15
	Semester Eight		
	AERN 45040	LABOR RELATIONS IN THE AVIATION INDUSTRY	3
	AERN 45200	STRATEGIC AVIATION MANAGEMENT (ELR)	3
	FIN 36053	BUSINESS FINANCE	3
	General Electives		5
		Credit Hours	14
		Minimum Total Credit Hours:	120

Professional Pilot Concentration

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

	Course	Title	Credits
	Semester One		
	AERN 15740	ELEMENTS OF FLIGHT THEORY	5
	AERN 15741	PRIVATE PILOT FLIGHT	5
!	MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	3
	UC 10097	DESTINATION KENT STATE: FIRST YEAR EXPERIENCE	1
	Kent Core Requirement		3
		Credit Hours	17
	Semester Two		
	Requirement: Student must have a 2.5000 cumulative GPA prior to commencing flight training courses		
	AERN 15000	INTRODUCTION TO AERONAUTICS	3
!	AERN 25250	ELEMENTS OF AVIATION WEATHER	3
	AERN 25350	FUNDAMENTALS OF AIR TRAFFIC CONTROL	2
	AERN 25351	FUNDAMENTALS OF AIR TRAFFIC CONTROL LABORATORY	1
	AERN 25743	COMMERCIAL PILOT FLIGHT I	2
!	MATH 11022	TRIGONOMETRY (KMCR)	3
		Credit Hours	14
	Semester Three		
	AERN 25100	INTRODUCTION TO AVIATION MANAGEMENT	3
	AERN 35644	INSTRUMENT FLIGHT THEORY	3
!	AERN 35645	INSTRUMENT PILOT FLIGHT	2
	COMM 15000	INTRODUCTION TO HUMAN COMMUNICATION (KADL)	3
	PHY 13001	GENERAL COLLEGE PHYSICS I (KBS)	4
!	PHY 13021	GENERAL COLLEGE PHYSICS LABORATORY I (KBS) (KLAB)	1
		Credit Hours	16
	Semester Four		
!	AERN 35020	AIRCRAFT PROPULSION SYSTEMS	3
	AERN 35647	COMMERCIAL PILOT FLIGHT II	2
	AERN 35746	COMMERCIAL PILOT THEORY	2
	PHY 13012	COLLEGE PHYSICS II (KBS)	2
!	PHY 13022	GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)	1
	Kent Core Requirement		3
		Credit Hours	13
	Semester Five		
	AERN 30000	PROFESSIONAL DEVELOPMENT IN AERONAUTICS	1
!	AERN 35040	AIRCRAFT SYSTEMS I	3
	AERN 35747	COMMERCIAL PILOT FLIGHT III	2
!	AERN 45150	APPLIED FLIGHT DYNAMICS I	3
	Kent Core Requirement		3
	Kent Core Requirement		3
		Credit Hours	15
	Semester Six		
	AERN 45030	AIRCRAFT SYSTEMS II	3
	AERN 45130	PHYSIOLOGY AND HUMAN FACTORS OF FLIGHT	3
	AERN 45648	THEORY OF FLIGHT INSTRUCTION (ELR)	3
	AERN 45649	FLIGHT INSTRUCTOR/AIRPLANES	2
	Kent Core Requirement		3
		Credit Hours	14
	Semester Seven		
!	AERN 45250	AVIATION LAW	3
!	AERN 45651	FLIGHT INSTRUCTOR-INSTRUMENTS	2
!	AERN 45653	MULTI-ENGINE PILOT FLIGHT	1
!	AERN 45720	CREW RESOURCE MANAGEMENT	2
!	AERN 45721	CREW RESOURCE MANAGEMENT LABORATORY	1
	Aeronautics (AERN) Electives		3
	Kent Core Requirement		3
		Credit Hours	15
	Semester Eight		
	AERN 45135	AVIATION SAFETY THEORY	3
!	AERN 45710	TURBINE ENGINE THEORY AND OPERATION	2
	AERN 45791	AVIATION SECURITY AND POLICY SEMINAR (WIC)	3
	AERN 35150 or AERN 45730 or AERN 45740	AIRCRAFT STRUCTURES or APPLIED TRANSPORT CATEGORY AIRCRAFT SYSTEMS or FLIGHT MANAGEMENT SYSTEMS	3
	Kent Core Requirement		3
	General Electives		2
		Credit Hours	16
		Minimum Total Credit Hours:	120

Unmanned Aircraft Systems Flight Operations Concentration

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

Course	Title	Credits
Semester One		
AERN 15000	INTRODUCTION TO AERONAUTICS	3
AERN 25800	INTRODUCTION TO UNMANNED AIRCRAFT SYSTEMS	3
MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	3
UC 10097	DESTINATION KENT STATE: FIRST YEAR EXPERIENCE	1
Kent Core Requirement		3
Kent Core Requirement		3
	Credit Hours	16
Semester Two		
AERN 15740	ELEMENTS OF FLIGHT THEORY	5
AERN 15741	PRIVATE PILOT FLIGHT	5
MATH 11022	TRIGONOMETRY (KMCR)	3
	Credit Hours	13
Semester Three		
AERN 25250	ELEMENTS OF AVIATION WEATHER	3
AERN 25350	FUNDAMENTALS OF AIR TRAFFIC CONTROL	2
AERN 25351	FUNDAMENTALS OF AIR TRAFFIC CONTROL LABORATORY	1
AERN 35810	UNMANNED AIRCRAFT SYSTEMS	3
Kent Core Requirement		3
Kent Core Requirement		3
	Credit Hours	15
Semester Four		
AERN 25100	INTRODUCTION TO AVIATION MANAGEMENT	3
AERN 35830	UNMANNED AIRCRAFT SYSTEMS SENSING AND SENSOR SYSTEMS	3
COMM 15000	INTRODUCTION TO HUMAN COMMUNICATION (KADL)	3
PHY 13001	GENERAL COLLEGE PHYSICS I (KBS)	4
PHY 13021	GENERAL COLLEGE PHYSICS LABORATORY I (KBS) (KLAB)	1
	Credit Hours	14
Semester Five		
AERN 30000	PROFESSIONAL DEVELOPMENT IN AERONAUTICS	1
AERN 35020	AIRCRAFT PROPULSION SYSTEMS	3
AERN 35892	SMALL UNMANNED AIRCRAFT SYSTEMS FLIGHT PRACTICUM (ELR)	2
PHY 13012	COLLEGE PHYSICS II (KBS)	2
PHY 13022	GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)	1
Aeronautics (AERN) Elective		3
Kent Core Requirement		3
	Credit Hours	15
Semester Six		
AERN 35040	AIRCRAFT SYSTEMS I	3
AERN 35650	NON-PILOT INSTRUMENT FLIGHT THEORY	3
AERN 45150	APPLIED FLIGHT DYNAMICS I	3
AERN 45250	AVIATION LAW	3
Kent Core Requirement		3
	Credit Hours	15
Semester Seven		
AERN 35840	UNMANNED AIRCRAFT SYSTEMS COMMAND, CONTROL AND COMMUNICATIONS	3
AERN 45030	AIRCRAFT SYSTEMS II	3
AERN 45130	PHYSIOLOGY AND HUMAN FACTORS OF FLIGHT	3
AERN 45150	APPLIED FLIGHT DYNAMICS I	3
Kent Core Requirement		3
	Credit Hours	15
Semester Eight		
AERN 35250	UNMANNED AIRCRAFT SYSTEMS LAW AND REGULATIONS	2
AERN 45135	AVIATION SAFETY THEORY	3
AERN 45791	AVIATION SECURITY AND POLICY SEMINAR (WIC)	3
AERN 45800	UNMANNED AIRCRAFT SYSTEMS FLIGHT OPERATIONS THEORY	4
AERN 45892	UNMANNED AIRCRAFT SYSTEMS FLIGHT PRACTICUM (ELR)	2
Kent Core Requirement		3
	Credit Hours	17
	Minimum Total Credit Hours:	120