PROFESSIONAL PILOT - B.S.

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

About This Program

Take flight with Kent State's Professional Pilot program. Our Bachelor of Science in Professional Pilot program prepares you for a successful career in the aviation industry. With a comprehensive curriculum, hands-on training and experienced faculty, you'll gain the skills and knowledge needed to become a skilled pilot. Read more...

Contact Information

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

Program Delivery

- **Delivery:**
  - In person
- **Location:**
  - Kent Campus

Accreditation

The B.S. degree in Professional Pilot 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.

Admission to the Professional Pilot major is selective.

New Students: Students must complete a pre-admission evaluation to be considered for admission. Inquiries may be directed to the College of Aeronautics and Engineering (cae@kent.edu).

Transfer Students: Students must have a minimum 2.250 overall GPA in all college-level coursework for admission to the Professional Pilot major.

International Students: All international students must provide proof of English language proficiency unless they meet specific exceptions. For more information, visit the admissions website for international students.

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

Program Requirements

Major Requirements

Code	Title	Credit Hours
Major Requirements (courses count in major GPA)		
AERN 15000	INTRODUCTION TO AERONAUTICS	3
AERN 15740	ELEMENTS OF FLIGHT THEORY	5
or AERN 15750 & AERN 15752	ELEMENTS OF FLIGHT THEORY I and ELEMENTS OF FLIGHT THEORY II	
AERN 15751	PRIVATE PILOT FLIGHT I	2
AERN 15753	PRIVATE PILOT FLIGHT II	3
AERN 25100	INTRODUCTION TO AVIATION MANAGEMENT	3
AERN 25250	ELEMENTS OF AVIATION WEATHER	3
AERN 25252	THUNDERSTORMS AND SEVERE 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 35020	AIRCRAFT PROPULSION SYSTEMS	3
AERN 35040	AIRCRAFT SYSTEMS I	3
AERN 35150	AIRCRAFT STRUCTURES	3
or AERN 45730	APPLIED TRANSPORT CATEGORY AIRCRAFT SYSTEMS	
or AERN 45740	FLIGHT MANAGEMENT SYSTEMS	
AERN 35660	INSTRUMENT FLIGHT THEORY	3
AERN 35661	INSTRUMENT PILOT FLIGHT	3
AERN 35665	COMMERCIAL PILOT FLIGHT: NAVIGATION	3
AERN 35760	COMMERCIAL PILOT THEORY	2
AERN 35761	COMMERCIAL PILOT FLIGHT	3
AERN 45030	AIRCRAFT SYSTEMS II	3
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 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 45791	AVIATION SECURITY AND POLICY SEMINAR (WIC) [1]	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 13012	COLLEGE PHYSICS II (KBS)	2
PHY 13021	GENERAL COLLEGE PHYSICS LABORATORY I (KBS) (KLAB)	1
PHY 13022	GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)	1
UC 10001	FLASHES 101	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)		6
General Elective (total credit hours depends on earning 120 credit hours, including 39 upper-division credit hours)		2
Minimum Total Credit Hours:		**120**

[1] A minimum C grade must be earned to fulfill the writing-intensive requirement.

Progression Requirements

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 Professional Pilot major; those students will be advised to change their program to the Aeronautical Studies major with the Professional Pilot minor.

Flight Training Courses: Beyond AERN 15751, all students are required to have and 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.

Students in Flight Training Courses must comply with the University Code of Student Conduct, Federal Aviation Regulations and policies outlined in the Kent State University Flight Operations Manual. Failure to comply may result in punitive actions, issuance of a failing course grade and/or dismissal from the Professional Pilot major.

Graduation Requirements

Minimum Major GPA	Minimum Overall GPA
2.500	2.500

- Flight courses may be repeated once with permission.

Roadmap

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.

	Semester One		Credits
	AERN 15000	INTRODUCTION TO AERONAUTICS	3
	AERN 15740 or AERN 15750	ELEMENTS OF FLIGHT THEORY or ELEMENTS OF FLIGHT THEORY I	3-5
	AERN 15751	PRIVATE PILOT FLIGHT I	2
!	MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	3
	UC 10001	FLASHES 101	1
	Kent Core Requirement		3
		Credit Hours	**15**
	Semester Two		
	Requirement: Student must have a 2.500 overall GPA prior to taking flight training courses.		
	AERN 15752	ELEMENTS OF FLIGHT THEORY II (required for students who took AERN 15750)	2
	AERN 15753	PRIVATE PILOT FLIGHT II	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
!	MATH 11022	TRIGONOMETRY (KMCR)	3
		Credit Hours	**14**
	Semester Three		
	AERN 25100	INTRODUCTION TO AVIATION MANAGEMENT	3
	AERN 35660	INSTRUMENT FLIGHT THEORY	3
	AERN 35661	INSTRUMENT PILOT FLIGHT	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 35020	AIRCRAFT PROPULSION SYSTEMS	3
	AERN 35665	COMMERCIAL PILOT FLIGHT: NAVIGATION	3
	COMM 15000	INTRODUCTION TO HUMAN COMMUNICATION (KADL)	3
!	PHY 13012	COLLEGE PHYSICS II (KBS)	2
!	PHY 13022	GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)	1
		Credit Hours	**15**
	Semester Five		
	AERN 30000	PROFESSIONAL DEVELOPMENT IN AERONAUTICS	1
!	AERN 35040	AIRCRAFT SYSTEMS I	3
	AERN 35760	COMMERCIAL PILOT THEORY	2
	AERN 35761	COMMERCIAL PILOT FLIGHT	3
!	AERN 45150	APPLIED FLIGHT DYNAMICS I	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
	Kent Core Requirement		3
		Credit Hours	**17**
	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
	Kent Core Requirement		3
	Kent Core Requirement		3
		Credit Hours	**14**
	Semester Eight		
	AERN 35150 or AERN 45730 or AERN 45740	AIRCRAFT STRUCTURES or APPLIED TRANSPORT CATEGORY AIRCRAFT SYSTEMS or FLIGHT MANAGEMENT SYSTEMS	3

	AERN 45135	AVIATION SAFETY THEORY	3
!	AERN 45710	TURBINE ENGINE THEORY AND OPERATION	2
!	AERN 45791	AVIATION SECURITY AND POLICY SEMINAR (WIC)	3
	Kent Core Requirement		3
	General Elective		2
		Credit Hours	**16**
		Minimum Total Credit Hours:	**120**

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.

Flashes 101 (UC 10001)	1 credit hour
Course is not required for students with 30+ 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 credit hours
Writing-Intensive Course (WIC)	1 course
Students must earn a minimum C grade in the course.	
Upper-Division Requirement	39 credit hours
Students must successfully complete 39 upper-division (numbered 30000 to 49999) credit hours to graduate.	
Total Credit Hour Requirement	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 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.

Full Description

The Bachelor of Science degree in Professional Pilot is designed for students who aspire to become professional pilots. This program 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.

Students may apply early to the M.S. degree in Aviation Management and Logistics and double count 9 credit hours of graduate courses toward both degree programs. See the Combined Bachelor's/Master's Degree Program policy in the University Catalog for more information.