PROFESSIONAL PILOT - B.S.

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

About This Program

Ready to train as a professional pilot with a program built on precision and performance? The Professional Pilot program combines FAA-approved coursework with advanced flight training in Kent State's university-owned fleet and integrated simulators, preparing students for careers in commercial, corporate, military and specialized aviation operations. 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

Examples of Possible Careers and Salaries*

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

Additional careers

- Aerial applicator/aerial crop duster/agriculture pilot
- Aerial hurricane hunter
- Air force pilot
- Air tour pilot
- Airline and commercial pilot
- Airline transport pilot
- Charter/private airline pilot
- Federal law enforcement pilot
- Fixed wing air ambulance captain - Emergency Medical Service (EMS)
- Flight dispatcher (with training/certification)
- Flight instructor

Accreditation

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

* Source of occupation titles and labor data comes 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.

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.

All students must complete a pre-admission evaluation to be considered for admission. Students applying to the Professional Pilot major and receiving admission to Kent State University will be placed into the Aeronautical Studies major, allowing students to begin any scholarship or financial aid applications while waiting for the final decision regarding the Professional Pilot major. Please see the College of Aeronautics and Engineering for additional information.

Transfer students must have a minimum 2.500 overall GPA in all college-level coursework to be considered for admission to the Professional Pilot major.

International Students: All international students must provide proof of proficiency of the English language (unless they meet specific exceptions) through the submission of an English language proficiency test score or by completing English language classes at Kent State's English as a Second Language Center before entering their program. 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 (min C grade)	5
or AERN 15750 & AERN 15752	ELEMENTS OF FLIGHT THEORY I and ELEMENTS OF FLIGHT THEORY II	
AERN 15751	PRIVATE PILOT FLIGHT I (min C grade)	2
AERN 15753	PRIVATE PILOT FLIGHT II (min C grade)	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 (min C grade)	3
AERN 35661	INSTRUMENT PILOT FLIGHT (min C grade)	3
AERN 35665	COMMERCIAL PILOT FLIGHT: NAVIGATION (min C grade)	3
AERN 35760	COMMERCIAL PILOT THEORY (min C grade)	2
AERN 35761	COMMERCIAL PILOT FLIGHT (min C grade)	3
AERN 45030	AIRCRAFT SYSTEMS II	3
AERN 45130	PHYSIOLOGY AND HUMAN FACTORS IN AVIATION	3
AERN 45135	AVIATION SAFETY THEORY	3
AERN 45150	APPLIED FLIGHT DYNAMICS I	3
AERN 45250	AVIATION LAW	3
AERN 45550	MULTI-ENGINE PILOT - THEORY (min C grade)	1
AERN 45551	MULTI-ENGINE PILOT - FLIGHT (min C grade)	1
AERN 45648	THEORY OF FLIGHT INSTRUCTION (ELR) (min C grade)	3
AERN 45649	FLIGHT INSTRUCTOR - AIRPLANES (min C grade)	3
AERN 45660	FLIGHT INSTRUCTOR - INSTRUMENTS THEORY (min C grade)	1
AERN 45661	FLIGHT INSTRUCTOR - INSTRUMENTS FLIGHT (min C grade)	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)		
CAE 12260	SOLVING PROBLEMS IN AERONAUTICS AND ENGINEERING [2]	1-3
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
Minimum Total Credit Hours:		**121**

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

2 Students scoring 34 or below on the ALEKS math assessment are required to enroll in CAE 12260 until they successfully complete MATH 00022.

Progression Requirements

Successful completion of the Professional Pilot major is an achievable goal for students who stay on track with the program's structured progression. The college support students in maintaining academic standing, obtaining and retaining appropriate medical clearance and successfully meeting course requirements. While challenges may arise, students are encouraged to use available resources and support systems to address them.

Flight Training Ground and Theory Courses

Students must pass all required flight training and associated flight theory courses with a minimum C grade and maintain a minimum 2.500 overall GPA. These courses may **not** be repeated without special approval.

Beyond AERN 15751, all students are required to 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 the semester in which they enrolled (e.g., a student who enrolls in a flight course in the fall must complete the course no later than the end of the following spring semester). This requirement is subject to waiver by the chief flight instructor assigned to the flight course. 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 the F grade. Flight fees will be refunded in accordance with the university policy regarding tuition credit for dropped courses.

Students must complete the commercial certificate and instrument rating at Kent State to be eligible for the FAA's R-ATP certificate.

Medical Requirements

Pilot certification dictates that certain medical standards be met. As such, all students are required to obtain and maintain FAA medical certification for program eligibility. While it is encouraged for all students to obtain first-class medical certification, all students starting in the Private Pilot Flight courses are required to obtain a minimum third-class medical certification. All flight courses beyond Private Pilot Flight require a minimum second-class medical certification.

Students admitted to the Professional Pilot major must have a medical in hand (minimum third class) before the start of their first flight course, but no later than the end of their first semester. If the medical is deferred (in progress by the FAA), students will have two full semesters to obtain the medical from the initial date their medical was deferred.

Continuing students who have their medical certificate deferred, suspended or revoked will be placed in a medical probationary status and have two full semesters to re-obtain medical clearance. If their medical clearance is not obtained by the end of the second semester, they must change their program to the Aeronautical Studies major.

Progression Ineligibility

A minimum 2.500 major GPA and overall 2.500 GPA is required for the Professional Pilot major. Students who fall below the minimum GPA will have two semesters to raise their GPA to the required minimum level.

Students may become ineligible to continue in the Professional Pilot major and be advised to change their program to the Aeronautical Studies major if any of the following occur:

1. Failure to to raise their major and/or overall GPA to the minimum required;

2. Failure to obtain or retain an appropriate level of medical clearance;
3. Failure of either an FAA-regulated flight theory course or a flight course; and/or
4. Failure to comply with Kent State Code of Student Conduct, Federal Aviation Regulations and policies outlined in the Kent State University Flight Operations Manual.

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 program. Students will work with their advisor to develop a sequence based on their academic goals and history. 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
	CAE 12260	SOLVING PROBLEMS IN AERONAUTICS AND ENGINEERING	1
	COMM 15000	INTRODUCTION TO HUMAN COMMUNICATION (KADL)	3
!	MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	3
	UC 10001	FLASHES 101	1
	Kent Core Requirement		3
	Kent Core Requirement		3
		Credit Hours	**17**
	Semester Two		
	Requirement: Students must have a 2.500 overall GPA prior to taking flight training courses.		
	AERN 15740 or AERN 15750	ELEMENTS OF FLIGHT THEORY or ELEMENTS OF FLIGHT THEORY I	3-5
	AERN 15751	PRIVATE PILOT FLIGHT I	2
!	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 15752	ELEMENTS OF FLIGHT THEORY II (required for students who took AERN 15750)	0-2
	AERN 15753	PRIVATE PILOT FLIGHT II	3
	AERN 25100	INTRODUCTION TO AVIATION MANAGEMENT	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	**16**
	Semester Four		
	AERN 25252	THUNDERSTORMS AND SEVERE WEATHER	3
!	AERN 35020	AIRCRAFT PROPULSION SYSTEMS	3
	AERN 35660	INSTRUMENT FLIGHT THEORY	3
	AERN 35661	INSTRUMENT PILOT FLIGHT	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 35665	COMMERCIAL PILOT FLIGHT: NAVIGATION	3
!	AERN 45150	APPLIED FLIGHT DYNAMICS I	3
	Kent Core Requirement		3
	Kent Core Requirement		3
		Credit Hours	**16**
	Semester Six		
	AERN 35760	COMMERCIAL PILOT THEORY	2
	AERN 35761	COMMERCIAL PILOT FLIGHT	3
!	AERN 45030	AIRCRAFT SYSTEMS II	3
!	AERN 45130	PHYSIOLOGY AND HUMAN FACTORS IN AVIATION	3
	Kent Core Requirement		3
		Credit Hours	**14**
	Semester Seven		
!	AERN 45250	AVIATION LAW	3
!	AERN 45720	CREW RESOURCE MANAGEMENT	2
	AERN 45648	THEORY OF FLIGHT INSTRUCTION (ELR)	3
	AERN 45649	FLIGHT INSTRUCTOR - AIRPLANES	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
	AERN 45550	MULTI-ENGINE PILOT - THEORY	1
	AERN 45551	MULTI-ENGINE PILOT - FLIGHT	1
	AERN 45660	FLIGHT INSTRUCTOR - INSTRUMENTS THEORY	1
	AERN 45661	FLIGHT INSTRUCTOR - INSTRUMENTS FLIGHT	1
		Credit Hours	**15**
		Minimum Total Credit Hours:	**121**

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. Demonstrate the knowledge, skills and techniques required to safely operate in single-pilot or multi-crew aircraft operations under FAR Parts 121, 135, 91K and other commercial aviation operations.
2. Analyze available information and problem solve as part of an aircrew, with respect to aircraft operation, airline operations, physiology, safety and emergency or challenging situations.
3. Demonstrate the skills of an aviation professional, make ethical decisions and correlate aviation business principles to operations.
4. Demonstrate instructional level knowledge and skills in application to single-engine and multi-engine flight, Visual Flight Rules (VFR) or Instrument Flight Rules (IFR).

The educational goals of the program are the following:

1. Exhibit the qualities of excellence, integrity, leadership, management and professionalism within their area of professional specialization in aviation.
2. Demonstrate a professional commitment to safety and contribute to the safety culture within their area of professional specialization in aviation.
3. Demonstrate the ability to improve aerospace for generations to come through experiential learning, creativity and innovation within their area of professional specialization in aviation.
4. Manifest the college's core values in the areas of collaboration, compassion, inclusiveness, innovation, integrity, respect and perseverance within their area of professional specialization in 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.

The mission of the Professional Pilot major is to prepare students to be professional pilots and enable them to obtain Federal Aviation Administration certificates and ratings required for giving flight and ground instruction and commercial and instrument operations in federally regulated commercial aviation operations.