

## **AVIATION**

Mr. Troy Hogue, Director; Mr. Richard Miller; Mr. Richard Wyman; Mr. Nathan Bradshaw; Dr. Jerry Robinson (Professor Emeritus).

The aviation program is designed to allow a student to qualify for Federal Aviation Administration (FAA) certificates and also complete requirements for a Bachelor of Science degree. Flight training is offered to qualify for the following certificates and ratings: Private Pilot Certificate, Commercial Pilot Certificate, Instrument Rating, Multiengine Rating, Flight Instructor Certificate, Instrument Instructor Rating, and Multiengine Instructor Rating.

Henderson State University is approved by the FAA to certify its qualified students for the Restricted ATP Certificate at 1,000 flight hours.

A student already holding an FAA pilot certificate or rating may gain college credit for that certificate or rating by successfully passing written, oral, and/or flight tests administered by the department. This credit may be awarded upon recommendation of the aviation faculty and successful completion of one semester as a full time student at Henderson. The cost of the examination and all associated flight activity is borne by the student. The recommendation for credit from aviation faculty may require additional flight training to address proficiency requirements of applicable training course outlines before the credit is awarded. Also, students receiving credit for pilot certificates and ratings not obtained through Henderson's flight training program may not qualify for Restricted ATP certification.

All flight training is conducted by certified flight instructors under the guidelines of Federal Aviation Regulations, Parts 141 and 61. The Airway Science Curriculum has received program recognition from the Federal Aviation Administration and the University Aviation Association.

Flight programs require a commitment from students. Students should plan on flying at least three times per week to meet their flight lab. Before beginning flight training, each student must pass at least a third class medical examination administered by an FAA medical examiner, obtain a student pilot's certificate (or greater), and receive Transportation Security Administration (TSA) certification. Students must also successfully complete a program entrance interview. Flight fees for aviation courses are in addition to the regular college registration fees. Flight fees consists of aircraft rental, one-on-one flight instruction charges for instruction given during flight, and one-on-one ground flight instruction given on the ground by FAA certified flight instructors. These fees are charged to the student after each flight and/or ground lesson contingent upon the amount of time spent in the aircraft and/or with the flight instructor. Students must meet eligibility requirements in CFR Title 14, Parts 61 and 141 applicable to the FAA certificate/rating being sought.

Two basic criteria are necessary to progress from one flight lab to the next: (1) the mandatory flight hours for the enrolled flight lab must be completed during the semester enrolled, and (2) all flight and ground lessons in the flight lab must be completed to the published completion standards during the semester enrolled. Lab grades will be assessed based upon the percentage of lab lessons completed and the percentage of mandatory hours completed. Students that do not complete all lab lessons within the mandatory hours must still complete those lessons prior to progressing to the next flight lab. Flight and ground fees will be charged to the student on a per-hour basis to complete any lab lessons that were not completed during the mandatory flight hours. If a student is unable to complete the flight lab within the registered semester as shown in the published class schedule, or within the mandatory flight hours, the student must bring this problem to the attention of the chief flight instructor, or their designee, as this may affect future funding for subsequent flight lessons and flight labs. It is the responsibility of the student to pay for any flight and ground fees not paid by financial aid and/or other providers of financial assistance. It is not mandatory that all flight fees be paid at the beginning of the semester – additional information on flight fee payment requirements may be obtained from the Department of Aviation.

Students are responsible for attending each scheduled flight lesson. Any missed lessons will be handled in accordance with the no-show policies stated in the Flight Operations Manual (FOM). A failed flight lab will not be allowed to be repeated due to poor attendance. Students may repeat a failed flight lab once, however if a student fails more than one flight lab they will not be permitted to continue in the flight training program.

In the event the student is unable to complete the flight lab by the end of the semester, due to circumstances beyond the student's control, a grade of "I" (incomplete) may be recorded for that flight lab at the faculty's discretion. If a grade of "I" is awarded, then a contract for completion will be filled out and those contract requirements must be complied with before a letter grade will be issued. Final grades for flight labs will be based on the individual lab grading policies stated in the syllabus.

### Mandatory Flight Hours and Fees

| Lab Name                                   | Flight Hours <sup>1</sup> | Flight Cost      | Ground Hours | Ground Cost    | Total      |
|--|---------------------------|------------------|--------------|----------------|------------|
| ANV1021 Intro to Aeronautics Lab .....     | 11.3 .....                | \$1,876.90 ..... | 7.0 .....    | \$316.75 ..... | \$2,193.65 |
| AVN1171 Pvt. Pilot Certification Lab ..... | 27.0 .....                | \$4,269.18 ..... | 14.0 .....   | \$633.50 ..... | \$4,902.68 |
| AVN2051 Com/Instrument Lab I .....         | 17.7 .....                | \$2,792.40 ..... | 6.0 .....    | \$271.50 ..... | \$3,063.90 |
| AVN2491 Com/Instrument Lab II .....        | 40.6 .....                | \$5,535.75 ..... | 3.5 .....    | \$158.38 ..... | \$5,694.13 |
| AVN3501 Com/Instrument Lab III .....       | 26.3 .....                | \$3,729.55 ..... | 12.0 .....   | \$543.00 ..... | \$4,272.55 |
| AVN3511 Com/Instrument Lab IV .....        | 28.2 .....                | \$4,814.10 ..... | 10.0 .....   | \$452.50 ..... | \$5,266.60 |
| AVN4521 Com/Instrument Lab V .....         | 43.2 .....                | \$8,453.35 ..... | 11.0 .....   | \$497.75 ..... | \$8,951.10 |
| AVN4421 Multiengine Lab .....              | 25.3 .....                | \$5,502.98 ..... | 10.0 .....   | \$452.50 ..... | \$5,955.48 |
| AVN4101 CFI Lab .....                      | 25.5 .....                | \$5,307.75 ..... | 18.0 .....   | \$814.50 ..... | \$6,122.25 |
| AVN4121 CFII Lab .....                     | 17.6 .....                | \$3,166.00 ..... | 12.0 .....   | \$543.00 ..... | \$3,709.00 |
| AVN4441 MEI Lab .....                      | 5.5 .....                 | \$2,102.88 ..... | 3.5 .....    | \$158.38 ..... | \$2,261.25 |

Notes:

1. Mandatory fees are based upon hourly rates listed below. Flight cost includes both aircraft rental and flight instructor fees for dual flights. Also includes check ride fees incurred during Private Pilot Certification Lab, Com/Instrument Labs IV and V, ME Lab, CFI Lab, CFII Lab, and MEI Lab.
2. A fuel surcharge may be implemented if necessary to compensate for market fluctuations.
3. Fees are current at the time of catalog publishing but are subject to change. Please contact the Department of Aviation or Registrar's office for the latest fee schedule.

### Aircraft and Instructor Fees (Hourly Rates)

| Aircraft / Instructor  | Description   | Cost / Hour |
|------------------------|---|-------------|
| Maule .....            | Four-place trainer .....  | \$123.25    |
| PA-28R-201 .....       | Four-place complex glass-cockpit trainer .....                    | \$145.25    |
| PA-30 .....            | Multi-engine trainer .....  | \$228.00    |
| Citabria .....         | Tail-wheel & spin trainer .....                                   | \$97.25     |
| Redbird FMX AATD ..... | Flight simulator with motion .....                                | \$90.50     |
| Instructor .....       | FAA Certified Flight Instructor .....                             | \$45.25     |
| DPE-SE .....           | FAA Designated Pilot Examiner – Single engine check ride .....    | \$450.00    |
| DPE-ME .....           | FAA Designated Pilot Examiner – Multiengine check ride .....      | \$600.00    |
| DPE-Retest .....       | FAA Designated Pilot Examiner – Retest of failed check ride ..... | \$350.00    |

### Major Requirements for the Bachelor of Science Degree - Professional Pilot Track (Minor required)

|          |  | Hours |
|----------|--|-------|
| AVN 1013 | Fundamentals of Aeronautics I .....            | 3     |
| AVN 1021 | Introduction to Aeronautics-Lab .....          | 1     |
| AVN 1403 | Fundamentals of Aeronautics II .....           | 3     |
| AVN 1161 | Private Pilot Certification .....              | 1     |
| AVN 1171 | Private Pilot Lab .....                        | 1     |
| MTH 1243 | College Algebra .....                          | 3     |
| MTH 1253 | Plane Trigonometry .....                       | 3     |
| PHY 2034 | General Physics I .....                        | 4     |
| PHY 2044 | General Physics II .....                       | 4     |
| AVN 2393 | Aviation Weather .....                         | 3     |
| AVN 2413 | Regulations and Publications .....             | 3     |
| AVN 2051 | Commercial/Instrument Pilot Lab I .....        | 1     |
| AVN 3383 | Commercial Preparation and Procedures I .....  | 3     |
| AVN 3071 | Instrument Pilot Certification .....           | 1     |
| AVN 3433 | Commercial Preparation and Procedures II ..... | 3     |
| AVN 2491 | Commercial/Instrument Lab II .....             | 1     |
| AVN 3501 | Commercial/Instrument Lab III .....            | 1     |

|          |  |    |
|----------|--|----|
| AVN 3511 | Commercial/Instrument Lab IV.....          | 1  |
| AVN 4521 | Commercial/Instrument Lab V.....           | 1  |
| AVN 2031 | Commercial Pilot Certification.....        | 1  |
| AVN 4131 | Multiengine Operations.....                | 1  |
| AVN 4421 | Multiengine Pilot Lab.....                 | 1  |
| AVN 2213 | Aviation Safety.....                       | 3  |
| AVN 3233 | Aircraft Systems Theory (WI).....          | 3  |
| AVN 3243 | Aircraft Powerplant Theory.....            | 3  |
| AVN 3263 | Air Traffic Control.....                   | 3  |
| AVN 3253 | Aviation Legislation (WI).....             | 3  |
| AVN 4223 | Advanced Aerodynamics and Performance..... | 3  |
| AVN 4483 | Advanced Technology and Automation.....    | 3  |
|          | Total Major Requirements.....              | 65 |

**To qualify for the Restricted ATP Certificate, students must complete all courses in the Professional Pilot track and these additional courses:**

|          |  |          |
|----------|--|----------|
| AVN 4101 | <b>Flight Instructor Lab.....</b>                  | <b>1</b> |
| AVN 4121 | <b>Instrument Instructor Lab.....</b>              | <b>1</b> |
| AVN 4333 | <b>Flight Instructor Practicum.....</b>            | <b>3</b> |
| AVN 4341 | <b>Flight Instructor Certification.....</b>        | <b>1</b> |
| AVN 4373 | <b>Instrument Flight Instructor Practicum.....</b> | <b>3</b> |

**For the Bachelor of Science Degree -  
Aviation Management Track  
(Minor required)**

|          |   | <b>Hours</b> |
|----------|---|--------------|
| AVN 1013 | Fundamentals of Aeronautics I.....                | 3            |
| AVN 1021 | Introduction to Aeronautics-Lab.....              | 1            |
| AVN 1403 | Fundamentals of Aeronautics II.....               | 3            |
| AVN 1161 | Private Pilot Certification.....                  | 1            |
| AVN 1171 | Private Pilot Lab.....                            | 1            |
| AVN 2213 | Aviation Safety.....                              | 3            |
| AVN 3253 | Aviation Legislation (WI).....                    | 3            |
| AVN 3283 | Aviation Management.....                          | 3            |
| AVN 4293 | Air Transportation.....                           | 3            |
| MGM 3113 | Management and Organizational Behavior.....       | 3            |
| MGM 4023 | Human Resource Management.....                    | 3            |
| MGM 4073 | Operations Management.....                        | 3            |
| MGM 4153 | Organizational Leadership.....                    | 3            |
| COM 3273 | Organizational Communication.....                 | 3            |
| MTH 1273 | Precalculus.....                                  | 3            |
| GBU 2013 | Mathematical Analysis for Business Decisions..... | 3            |
| GBU 3143 | Legal Environment of Business.....                | 3            |
| CSC 2003 | Introduction to Computers.....                    | 3            |
| CSC 2163 | Computer Applications.....                        | 3            |
| ENG 3613 | Technical Writing.....                            | 3            |
| GBU 3133 | Business Statistics.....                          | 3            |
|          | Total Major Requirements.....                     | 57           |

**For the Bachelor of Science Degree  
(Aviation Maintenance Management Track)**

**Hours**

**MINOR NOT REQUIRED**

|  |    |
|--|----|
| Courses completed in Aviation Mechanics<br>Technical School during the Freshman and Sophomore years..... | 62 |
|--|----|

|          |  |    |
|----------|--|----|
| AVN 1013 | Fundamentals of Aeronautics I.....           | 3  |
| AVN 1021 | Introduction to Aeronautics Lab.....         | 1  |
| AVN 1403 | Fundamentals of Aeronautics II .....         | 3  |
| AVN 1061 | Private Pilot Certification .....            | 1  |
| AVN 1171 | Private Pilot Certification Lab.....         | 1  |
| CHM 1034 | General Chemistry Non-Majors .....           | 4  |
| BIS 2073 | Fundamentals of Information Systems .....    | 3  |
| AVN 4223 | Aerodynamics.....                            | 3  |
| AVN 3283 | Aviation Management .....                    | 3  |
| MGM 3113 | Management and Organizational Behavior ..... | 3  |
| AVN 2213 | Aviation Safety .....                        | 3  |
| AVN 3253 | Aviation Legislation (WI) .....              | 3  |
| ENG 3613 | Technical Writing .....                      | 3  |
|          | Total Major Requirements .....               | 96 |

Aviation Maintenance Management track students must also complete 24 upper level credit hours of electives, with at least 9 of those 24 upper level credit hours being upper level aviation courses.”

All non-aviation courses required by the aviation major must be passed with a grade of "C" or higher.

Students participating in the Aviation Management track or Aviation Maintenance Management track may have the requirements of AVN 1021 Introduction to Aeronautics Lab, AVN 1061 Private Pilot Certification, and AVN 1171 Private Pilot Lab waived upon approval of the director of the department.

#### Requirements for Minor in Aviation

(for Minor in Aviation without an emphasis on Small Unmanned Aircraft Systems)

|          |                                |
|----------|--------------------------------|
| AVN 1013 | Fundamentals of Aeronautics I  |
| AVN 1403 | Fundamentals of Aeronautics II |
| AVN 2213 | Aviation Safety                |
| AVN 3233 | Aircraft Systems Theory (WI)   |
| AVN 3243 | Aircraft Powerplant Theory     |
| AVN 3253 | Aviation Legislation (WI)      |

#### Requirements for Minor in Aviation with Emphasis on Small Unmanned Aircraft Systems

The minor in Aviation with Emphasis on Small Unmanned Aircraft Systems provides the education and training to obtain the Federal Aviation Administration’s Remote Pilot – Small Unmanned Aircraft Systems certificate. This minor also includes engineering courses needed to understand techniques and processes used in the construction of Small Unmanned Aircraft Systems.

|          |                             |
|----------|-----------------------------|
| EGR 1201 | Introduction to Engineering |
| EGR 1413 | Engineering Graphics        |

One of the following three courses:

- EGR1011 Engineering Shop, or
- EGR 2584 Electrical Circuits I, or
- EGR 3474 Electronics I

|          |   |
|----------|---|
| AVN 3143 | Fundamentals of Small Unmanned Aerial Systems |
| AVN 3151 | sUAS Lab                                      |
| AVN 3253 | Aviation Legislation                          |

#### Courses in Aviation

**AVN 1013. Fundamentals of Aeronautics I.** This course serves as a foundation of things to come in the aviation field. The course will involve: an overview of the aviation field, an introduction to flight maneuvers, human factors, the aeronautical decision making process, small airplane systems, powerplant operation, basic aerodynamics, safety considerations, airport operations, printed weather reports, performance charts, weight and balance, and technical subject and federal regulations areas appropriate to the student pilot.

**AVN 1021. Introduction to Aeronautics Lab.** Flight instruction to prepare the student pilot for the first supervised solo flight. Includes preflighting the aircraft, taxiing, take-off and landings, and basic flight maneuvers. Emphasis on safety and good decision-making. Corequisite: AVN 1013.

**AVN 1403. Fundamentals of Aeronautics II.** This course is an extension of Fundamentals of Aeronautics I. The course will involve: aeronautical charts, airspace, radio procedures, radar and ATC services, sources of flight information, weather hazards, graphic weather products, navigation, aviation physiology, aerodynamic principles, PTS usage, and technical subject areas and federal regulations appropriate to the private pilot. Prerequisite: AVN 1013.

**AVN 1161. Private Pilot Certification.** Ground school instruction in preparation for the FAA Private Pilot written examination. Prerequisites: AVN 1013, AVN 1021.

**AVN 1171. Private Pilot Lab.** Flight instruction necessary to complete requirements for the FAA Private Pilot Certificate. Prerequisites: AVN 1013 and AVN 1021. Corequisites: AVN 1403, AVN 1161.

**AVN 2031. Commercial Pilot Certification.** Ground instruction in preparation for the FAA Commercial Pilot written examination and Commercial Pilot certification; instruction emphasizes advanced aerodynamics, aircraft performance, precision maneuvers, extended cross country and night flight, relevant FAA regulations, introduction to advanced systems and transition to more sophisticated aircraft. Prerequisite: AVN 1171.

**AVN 2051. Commercial/Instrument Lab I. Flight Instruction necessary to complete Stage 1 of the Commercial Pilot Course.** Students will learn Commercial flight maneuvers needed for the Commercial Pilot Certificate. Prerequisite: AVN 1171.

**AVN 2213. Aviation Safety.** Psychological, physical, and operational aspects of flight and aviation ground safety. Elements of accident investigation and prevention. Studies will be made of actual aircraft accidents to determine causal factors, with special attention to weather factors. Possible preventive measures will be proposed. Investigation of crashworthiness, crash survivability, and after crash survival factors. Prerequisites: AVN 1013, AVN 1403.

**AVN 2393. Aviation Weather.** Addresses elementary concepts and vocabulary necessary to understand aviation applications. The course covers a wide variety of atmospheric circulation systems and associated flight hazards. The aviation weather course introduces the student to the forecasting process, aviation products and an overview of weather information sources, allowing the student to interpret the information obtained in briefings, printed reports, and graphic weather products to enhance flight safety. Prerequisites: AVN 1013, AVN 1403.

**AVN 2413. Regulations and Publications.** This course will involve an in depth look at the Federal Aviation Regulations, Airman's Information Manual, Practical Test Standards, Advisory Circulars, other FAA publication, and the Pilot's Operating Handbook. Prerequisites: AVN 1013, AVN 1403.

**AVN 2491. Commercial/Instrument Lab II.** Flight Instruction necessary to complete Stage 2 of the Commercial Pilot Course. Students will complete cross country flight training needed for the Commercial Certificate. Prerequisite: AVN 2051.

**AVN 3071. Instrument Pilot Certification.** Preparation for FAA Instrument Pilot written examination. Course completion requires passing the FAA Instrument written exam. Corequisite: AVN 3501.

**AVN 3143. Fundamentals of Small Unmanned Aerial Systems.** This course provides the technical subject areas and federal regulations appropriate to become a commercial Remote Pilot – Small Unmanned Aircraft Systems operator. Included in this course is preparation for the FAA Remote Pilot – Small Unmanned Aircraft Systems knowledge examination. Student will test for the FAA Remote Pilot – Small Unmanned Aircraft Systems certificate at the end of the course.

**AVN 3151. Small Unmanned Aerial Systems Lab.** Instruction to fly and control the Small Unmanned Aircraft Systems platform. Prerequisite or Corequisite: AVN3143 Fundamentals of Small Unmanned Aerial Systems.

**AVN 3233. (WI) Aircraft Systems Theory.** This study of aircraft structures and systems gives the professional pilot the theoretical knowledge needed to safely and efficiently operate modern aircraft systems. In depth discussion of electrical,

mechanical, and hydraulic systems, design and performance standards, capabilities and limitations, and conformance to FAA specifications. Prerequisites: AVN 2031.

**AVN 3243. Aircraft Powerplant Theory.** A study of aircraft powerplants, including piston engines and associated systems, turboprops, and fan- and turbojets. The course is designed to give the professional flight crew an in-depth knowledge of the aircraft "forward of the firewall." Prerequisites: AVN 2031.

**AVN 3253. (WI) Aviation Legislation.** Discussion of federal, state and local aviation regulations, and the legislation underlying them. Structure of the Federal Aviation Administration and discussion of the influence of the Civil Aeronautics Administration and the Federal Aviation Agency on present regulatory bodies. Legal concepts concerning aviation as related to operation, contracts, insurance and liability, regulatory statutes, and case law. Prerequisite: AVN 2413.

**AVN 3263. Air Traffic Control.** Provides in-depth knowledge of air traffic control procedures, navigation aids, the role of centers, approach control, towers and flight service stations, airport traffic area operations, radar and non-radar procedures, and facility management.

**AVN 3283. Aviation Management.** Management techniques and administrative functions as applied to the aviation industry; includes problems, current issues and future trends related to aviation operations, planning, and economic and resource considerations.

**AVN 3303. Avionics Systems Theory.** This course gives the theoretical knowledge of aircraft control, navigation, communications, and autopilot systems which flight crews need to safely and efficiently operate these systems. Some attention will be given to actual in-flight operation of these systems. Prerequisites: AVN 3233, 3071.

**AVN 3383. Commercial Preparation and Procedures I.** In depth preparation for both the Commercial Certificate and the Instrument Rating. Theoretical and practical aspects of instrument flying will be introduced. Prerequisite: AVN 1171. Prerequisite or Corequisite: AVN 2393.

**AVN 3433. Commercial Preparations and Procedures II.** A commercial pilot certificate is the essence of being a professional in the field of aviation. This course will prepare you for the professional pilot realm in the following ways: an overview of flight maneuvers, technical subject areas necessary to complete the requirements of a Commercial Pilot Certificate, Crew Resource Management, and interview preparation. Prerequisite: AVN 3383.

**AVN 3501. Commercial/Instrument Lab III.** Flight Instruction necessary to complete Stages 1 and 2 of the Instrument Rating Course. Students will learn to develop an instrument scan for both full and partial panel flight. Students will also learn elements related to the departure, enroute, and arrival phases of flight under Instrument Flight Rules (IFR). Prerequisite: AVN 2491; Corequisites: AVN 3071, AVN 3383.

**AVN 3511. Commercial/Instrument Lab IV.** Flight Instruction necessary to complete Stage 3 of the Instrument Rating Course and Stages 3 and 4 of the Commercial Pilot Course. Students will complete cross countries under Instrument Flight Rules (IFR) and complete requirements necessary for the Instrument Rating. Students will also complete a Complex Aircraft Transition in a Technically Advanced Aircraft (TAA). Prerequisite: AVN 3501.

**AVN 4101. Flight Instructor Lab.** Flight instruction necessary to complete requirements for the FAA Certified Flight Instructor certificate. Corequisites: AVN 4341, AVN 4333.

**AVN 4121. Instrument Instructor Lab.** Flight instruction necessary to complete requirements for the FAA Certified Flight Instructor - Instrument certificate. Corequisites: AVN 4351, AVN 4373.

**AVN 4131. Multiengine Operations.** Ground instruction in preparation for the FAA Multiengine rating. Course content includes transition to multiengine aircraft, multiengine aircraft systems and operations, and emergency procedures. Prerequisite: FAA Commercial Pilot Certificate.

**AVN 4181. Multiengine Instructor Practicum.** Principles and methodology of teaching multiengine flight. Prerequisites: AVN 4131, AVN 4421 and FAA Flight Instructor Certificate.

**AVN 4223. Advanced Aerodynamics and Performance.** Aerodynamics for flight crews, including theories of lift generation, stability, laminar and non laminar flow, control, and lift and drag producing devices. Aircraft performance will

be studied, with particular attention to safe aircraft operation. Weight and balance will be studied for its effect on performance and control. Prerequisites: AVN 1171, 2031; PHY 2034, 2044; MTH 1243 or MTH 1273.

**AVN 4293. Air Transportation.** A survey of the historical development of the air transportation system covering facilities, impact of regulations, problems encountered in commercial air transportation, future requirements, airline operations, economics and social implications.

**AVN 4323. Independent Study.** Selected topics of current interest in the field of aviation. Strong emphasis on a mature approach to research and writing. May be repeated for a maximum of six hours credit with a change of topic. Prerequisite: senior standing or consent of the instructor.

**AVN 4333. Flight Instructor Practicum.** Methodology and instructional procedures necessary for effective instruction of private and commercial students. Emphasis on preparation and oral presentation of ground and flight lessons; practice in teaching and briefing techniques. Prerequisite: AVN 3511. Corequisites: AVN 4101, AVN 4341.

**AVN 4341. Flight Instructor Certification.** Ground instruction preparing the student for the flight instructor oral and written examinations. Corequisites: AVN 4333, AVN 4101.

**AVN 4351. Instrument Flight Instructor Certification.** Ground instruction preparing the student for the instrument flight instructor oral and written examinations. Corequisites: AVN 4121, AVN 4373. Prerequisite: AVN 4521.

**AVN 4373. Instrument Flight Instructor Practicum.** Methodology and instructional procedures necessary for effective instruction of instrument students. Emphasis on preparation and oral presentation of ground and flight lessons; practice in teaching and briefing techniques. Prerequisite: AVN 4333. Corequisites: AVN 4121, AVN 4351.

**AVN 4421. Multiengine Pilot Lab.** Flight instruction necessary to complete requirements for the Multiengine rating. Prerequisite: AVN 4521. Corequisite: AVN 4131.

**AVN 4441. Multiengine Instructor Lab.** Flight instruction necessary for the FAA Multiengine Instructor rating.

**AVN 4453. Aviation Operations Internship I.** Prearranged, supervised work experience in aviation flight or ground operations. Course requires completion of a minimum of 120 hours of practical work in an approved business organization, a report from that business organization confirming that the assigned work was satisfactory, and the submission of a paper detailing the work performed and an analysis of the work experience. If the internship is performed at Arkadelphia Airport, the work experience will include: line operations, aircraft cleaning, aircraft refueling, aircraft marshaling, aircraft parking, etc. Approval of instructor required.

**AVN 4463. Aviation Operations Internship II.** Prearranged, supervised work experience in aviation flight or ground operations. Course requires completion of a minimum of 120 hours of practical work in an approved business organization, a report from that business organization confirming that the assigned work was satisfactory, and the submission of a paper detailing the work performed and an analysis of the work experience. If the internship is performed at Arkadelphia Airport, the work experience will include: Aviation business operations, customer service, filing, scheduling, etc. Approval of instructor required.

**AVN 4473. Air Transport Pilot Certification.** Ground instruction in preparation for the FAA ATP written examination; instruction emphasizes advanced aerodynamics, aircraft performance, precision maneuvers, extended cross country and night flight, relevant FAA regulations, introduction to advanced systems and transition to more sophisticated aircraft.

**AVN 4483. Advanced Technology and Automation.** A realistic, scenario based study of advanced aircraft automation. The course will introduce and allow students to have realistic interaction with advanced equipment seen in business and regional jets. It will also introduce pilot interaction and aircrew considerations when operating with advanced technology. The course will further strengthen instrument knowledge and further demonstrate common operations within the National Airspace System. Prerequisite: AVN 3501.

**AVN 4521. Commercial/Instrument Lab V. Flight Instruction necessary to complete Stages 5 and 6 of the Commercial Pilot Course. Students will complete cross countries under Instrument Flight Rules (IFR) and will be introduced to Crew Resource Management (CRM). Students will also complete requirements necessary for the Commercial Pilot Certificate. Prerequisite: AVN 3511 (Commercial Lab IV).**

**AVN 4531. Aviation Mentorship.** This course provides an arranged pairing of students with professionals in the aviation industry that have agreed to serve as mentors. The mentor will provide insight to the practical application of the knowledge and skills the student has developed through their previous courses; provide students perspectives on what the aviation industry expects of them as new graduates; offer suggestions on improving personal and professional skills; provide insight on successful ways to enter and function in the aviation industry. **This course may be repeated once to provide additional viewpoints from differing industry perspectives and requirements, i.e. comparing the airline environment to the corporate environment.** Prerequisites: Completion of an application and consent of the faculty director of the Aviation Mentorship Program.

### STANDARD OF PROGRESS (SOP) ADDENDUM TO FLIGHT

Flight programs require a commitment from students. Students should plan on flying at least three times per week to meet their flight lab. Before beginning flight training, each student must pass at least a third class medical examination administered by an FAA medical examiner, obtain a student pilot's certificate (or greater), and receive Transportation Security Administration (TSA) certification. Students must also successfully complete a program entrance interview. Flight fees for aviation courses are in addition to the regular college registration fees. Flight fees consists of aircraft rental, one-on-one flight instruction charges for instruction given during flight, and one-on-one ground flight instruction given on the ground by FAA certified flight instructors. These fees are charged to the student after each flight and/or ground lesson contingent upon the amount of time spent in the aircraft and/or with the flight instructor. Students must meet eligibility requirements in CFR Title 14, Parts 61 and 141 applicable to the FAA certificate/rating being sought.

Two basic criteria are necessary to progress from one flight lab to the next: (1) the mandatory flight hours for the enrolled flight lab must be completed during the semester enrolled, and (2) all flight and ground lessons in the flight lab must be completed to the published completion standards during the semester enrolled. Lab grades will be assessed based upon the percentage of lab lessons completed and the percentage of mandatory hours completed. Students that do not complete all lab lessons within the mandatory hours must still complete those lessons prior to progressing to the next flight lab. Flight and ground fees will be charged to the student on a per-hour basis to complete any lab lessons that were not completed during the mandatory flight hours. If a student is unable to complete the flight lab within the registered semester as shown in the published class schedule, or within the mandatory flight hours, the student must bring this problem to the attention of the chief flight instructor, or their designee, as this may affect future funding for subsequent flight lessons and flight labs. It is the responsibility of the student to pay for any flight and ground fees not paid by financial aid and/or other providers of financial assistance. It is not mandatory that all flight fees be paid at the beginning of the semester – additional information on flight fee payment requirements may be obtained from the Department of Aviation.

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| <b>Mandatory Flight Hours and Fees</b>   |  |                    |                     |                    |              |
|--|--|--------------------|---------------------|--------------------|--------------|
| <b>Lab Name</b>  | <b>Flight Hours<sup>1</sup></b>          | <b>Flight Cost</b> | <b>Ground Hours</b> | <b>Ground Cost</b> | <b>Total</b> |
| ANV1021 Intro to Aeronautics Lab   | 11.3                                     | \$1,876.90         | 7.0                 | \$316.75           | \$2,193.65   |
| AVN1171 Pvt. Pilot Certification Lab   | 27.0                                     | \$4,269.18         | 14.0                | \$633.50           | \$4,902.68   |
| AVN2051 Com/Instrument Lab I   | 17.7                                     | \$2,792.40         | 6.0                 | \$271.50           | \$3,063.90   |
| AVN2491 Com/Instrument Lab II  | 40.6                                     | \$5,535.75         | 3.5                 | \$158.38           | \$5,694.13   |
| AVN3501 Com/Instrument Lab III   | 26.3                                     | \$3,729.55         | 12.0                | \$543.00           | \$4,272.55   |
| AVN3511 Com/Instrument Lab IV  | 28.2                                     | \$4,814.10         | 10.0                | \$452.50           | \$5,266.60   |
| AVN4521 Com/Instrument Lab V   | 43.2                                     | \$8,453.35         | 11.0                | \$497.75           | \$8,951.10   |
| AVN4421 Multiengine Lab  | 25.3                                     | \$5,502.98         | 10.0                | \$452.50           | \$5,955.48   |
| AVN4101 CFI Lab  | 25.5                                     | \$5,307.75         | 18.0                | \$814.50           | \$6,122.25   |
| AVN4121 CFII Lab   | 17.6                                     | \$3,166.00         | 12.0                | \$543.00           | \$3,709.00   |
| AVN4441 MEI Lab  | 5.5                                      | \$2,102.88         | 3.5                 | \$158.38           | \$2,261.25   |
| Notes:   |  |                    |                     |                    |              |
| 1) Mandatory fees are based upon hourly rates listed below. Flight cost includes both aircraft rental and flight instructor fees for dual flights.   |  |                    |                     |                    |              |
| 2) A fuel surcharge may be implemented if necessary to compensate for market fluctuations.   |  |                    |                     |                    |              |
| 3) Fees are current at the time of catalog publishing but are subject to change during catalog printing cycles. Please contact the Department of Aviation or Registrar's office for the latest fee schedule. |  |                    |                     |                    |              |
| <b>Aircraft and Instructor Fees (Per Hour)</b>   |  |                    |                     |                    |              |
| <b>Aircraft / Instructor</b>   | <b>Description</b>                       |                    |                     | <b>Cost / Hour</b> |              |
| Maule  | Four-place trainer                       |                    |                     | \$123.25           |              |
| PA-28R-201   | Four-place complex glass-cockpit trainer |                    |                     | \$145.25           |              |
| PA-30  | Multi-engine trainer                     |                    |                     | \$228.00           |              |
| Citabria   | Tail-wheel & spin trainer                |                    |                     | \$97.25            |              |
| Redbird FMX AATD   | Flight simulator with motion             |                    |                     | \$90.50            |              |
| Instructor   | FAA Certified Flight Instructor          |                    |                     | \$45.25            |              |