<table>
<thead>
<tr>
<th>Instructor</th>
<th>Classroom/Times</th>
<th>Office Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAPT. Tim Tyre, Ph.D.</td>
<td>lecture T 6:00-9:15 PMBERG 103</td>
<td>Posted and by Appointment</td>
</tr>
<tr>
<td></td>
<td>Lab TTH 1600-1800 SCA Airport</td>
<td></td>
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</tbody>
</table>

**Textbook**


**Prerequisites**

Certain criteria must be met in order to start training. These are mandated by the FAA. To ensure standards are met students must meet with the program director for a brief personal interview.

- FAA Eligibility Requirements (FAR/AIM 2014 Edition)
- TSA Security Documents (for international students)
- Mandatory Interview with Program Director (prior to first class)
- There are no course prerequisites

**Assessment**

| Exams 3@23 | 69% |
| Quizzes    | 6%  |
| Flight instruction | 25% |
| Total | 100% |

*The instructor and the university reserve the right to modify, amend, or change the syllabus (course requirements, grading policy,...). You will be given prior notice of such changes*

**Grades defined**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93-100</td>
</tr>
<tr>
<td>AB</td>
<td>89-93</td>
</tr>
<tr>
<td>B</td>
<td>82-89</td>
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<td>BC</td>
<td>78-82</td>
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<td>C</td>
<td>70-78</td>
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<tr>
<td>D</td>
<td>60-70</td>
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<tr>
<td>F</td>
<td>&lt;60</td>
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**A:** excellent 
**AB:** Intermediate grade 
**B:** good 
**BC:** Intermediate grade 
**C:** average 
**D:** low merely passing 
**F:** failure

**Catalog Description**

A course which introduces basic concepts of aviation knowledge sufficient to prepare the student for completion of the FAA private pilot knowledge test. Content includes aerodynamics, aircraft systems, flight environment, weather, FAA regulations, aircraft performance, human factors, navigation and cross country flight planning. (Students must meet with course instructor prior to first class)

**Course Objectives**

1. To introduce a working knowledge of pertinent general aviation definitions, aeronautical concepts involving basic flight and pre-flight safety checklist usage.
2. To teach students the importance and proper use of pre-flight operational checklists for aircraft airworthiness, engine system status for safe flight and review of pilot controlled input systems to assure safe operations in flight.
3. To teach students the pertinent FAR (FAA), required knowledge competencies to allow a formal FAA Instructor’s endorsement for completion of the FAA private pilot knowledge test.
4. To discuss aviation history.
5. To discuss the human factors and decision making relative to aviation.
6. To learn the skills necessary to fly a fixed-wing single engine aircraft/simulator.* Lab option required for this objective
Learning Outcomes
(see corresponding number above)

At the completion of the course students should,
1. Understand basic definitions, concepts and applications of aeronautical knowledge.
2. Acquire basic skills in pre-flight operations.
3. Demonstrate competency in aeronautical knowledge across the FAA private pilot knowledge content areas as delineated in FAR/AIM 61.105, a-b
4. Know the historical landmarks in the development of manned flight.
5. Have the skills necessary to make crucial decisions using all the available resources.
6. Be able to accomplish basic flight maneuvers.* Lab option required

Summative Assessment Matrix:

<table>
<thead>
<tr>
<th>Learning Outcomes</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>instrument</td>
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<td>terminology</td>
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<td>Pre-flight</td>
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<tr>
<td>operations</td>
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<td>FAA knowledge</td>
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<td>history</td>
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<tr>
<td>Decision making</td>
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<tr>
<td>Flight maneuvers</td>
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</table>

- **Exams (69%)** There will be three (60min) unit exams. These will determine your understanding of the concepts/material discussed in the lectures. The topics/chapters covered on each exam will be posted on LMS. (Related to outcomes 1-6)

- **Lab-Flight Instruction (25%)** The lab component of this course will be carried at Waukesha County Airport. There are two regularly scheduled periods for flight instruction. Once students have an instructor assigned, they can make additional appointments through flightschedulepro.com. A lesson plan for private pilot training is attached. Progress through the lesson plan will be determined by aptitude, practice, and pre-flight preparation. Flight instructors at SCA will oversee individual lesson plans. You will be graded on your proficiency and the progress you make in mastering basic flight maneuvers. (Related to outcomes 3,5,6)

- **Quizzes (6%)** Short quizzes will be given periodically to assessment understanding of major concepts. These will be generally unannounced.(Related to outcomes 1-4)

Medical Requirement

*Medical Certification.* All pilots except those flying gliders and free air balloons must possess valid medical certificates in order to exercise the privileges of their airman certificates. The periodic medical examinations required for medical certification are conducted by designated Aviation Medical Examiners, who are physicians with a special interest in aviation safety and training in aviation medicine. The standards for medical certification are contained in 14 CFR Part 67. Pilots who have a history of certain medical conditions described in these standards are mandatorily disqualified from flying. These medical conditions include a personality disorder manifested by overt acts, a psychosis, alcoholism, drug dependence, epilepsy, an unexplained disturbance of consciousness, myocardial infarction, angina pectoris and diabetes requiring medication for its control. Other medical conditions may be temporarily disqualifying, such as acute infections, anemia, and peptic ulcer. Pilots who do not meet medical standards may still be qualified under special issuance provisions or the exemption process. This may require that either additional medical information be provided or practical
flight tests be conducted.

Student pilots should visit an Aviation Medical Examiner as soon as possible in their flight training in order to avoid unnecessary training expenses should they not meet the medical standards. For the same reason, the student pilot who plans to enter commercial aviation should apply for the highest class of medical certificate that might be necessary in the pilot's career. (Students will pay for this examination. Participating physicians can be found through the FAA website.)

FAA MedXPress is a web application pilots must use to submit their certification applicant information (Items 1 through 20) of the FAA Form 8500-8. Pilots need only a valid email address to create a MedXPress account to use FAA MedXPress. MedXPress is designed to expedite the processing of a pilot's request for certification and shorten the pilot's office visit with the AME.

<table>
<thead>
<tr>
<th>A third-class medical certificate</th>
<th>(i) Under age 40</th>
<th>Under age 40</th>
<th>Under age 40 or older</th>
</tr>
</thead>
<tbody>
<tr>
<td>a recreational pilot certificate, a private pilot certificate, a flight instructor certificate (when acting as pilot in command or a required pilot flight crewmember in operations other than glider or balloon), a student pilot certificate, or a sport pilot certificate (when not using a U.S. driver's license as medical qualification)</td>
<td>60th month after the month of the date of examination shown on the medical certificate.</td>
<td>24th month after the month of the date of examination shown on the medical certificate</td>
<td></td>
</tr>
</tbody>
</table>

Attendance: Students are expected to attend each class/lab meeting. If I notice a history of waywardness from the lecture room (2 or more unexcused absences from class) you will be assigned a failing grade for the course. If a student is absent from a lab class, the student may reschedule the experiment only if the student has an authorized absence. A physician must document absence due to illness. Any experiment that is not completed by the student will subsequently reduce the lab grade average. Due to the nature of some of these labs it may be difficult to reschedule. Class attendance is imperative. The material will mount quickly and it is very easy to fall behind in the class.

Make-up Policy There are no make-up exams for students afflicted with laziness, tardiness, or forgetfulness. If a student must miss an exam (with a properly verified and documented absence: illness, university related activity) this must be discussed with the professor, and arrangement to take the exam may be arranged. Flight instructors can have busy schedules. In scheduling flight time it will be be necessary to book both instructor and plane. If you reserve a plane no one else can use!

Late Policy All late work will be penalized by a 10% reduction in grade for each day beyond the original due date.

Electronic Equipment Please turn off all electronic equipment (cell phones, iPods, recording devices, …)

Plagiarism The Carroll University Academic Integrity Policy is located in the student handbook. I encourage you to familiarize yourself with it. If a student violates this policy in any way, I reserve the right to impose a sanction of failure on the assignment/assessment or failure in the course. If you have any questions about appropriate citations, please ask.

Special Needs Students with documented disabilities who may need accommodations, or any student considering obtaining documentation should make an appointment with Martha Bledsoe, our disabilities coordinator, no later than the first week of class. She can be reached by calling 524-7335 or contacting her via e-mail at mbledsoe@carrollu.edu.
Amendments to the Syllabus  The instructor and the university reserve the right to modify, amend, or change the syllabus course requirements.

Course Content

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to Aviation, historical landmarks in the Development of Manned Flight</td>
</tr>
<tr>
<td>2</td>
<td>Influences of World War I and World War II on Aviation Technology</td>
</tr>
<tr>
<td>3</td>
<td>Human Factors and Aeronautical Decision Making</td>
</tr>
<tr>
<td>4</td>
<td>Pilot Training Requirements (FAA)</td>
</tr>
<tr>
<td>5</td>
<td>Aerodynamic Principles</td>
</tr>
<tr>
<td>6</td>
<td>Aerodynamic Principles and Aircraft Stability</td>
</tr>
</tbody>
</table>
| 7    | Airplane Systems (Gyrosopic and Pitot Static Systems)  
|      | Aircraft Instrumentation and Error |
| 8    | The National Airspace System |
| 9    | Airport Operations and FAA Communications |
| 10   | FAA Regulations |
| 11   | Aircraft Performance Factors and Pilot Calculations |
| 12   | Weight and Balance Issues, Airworthiness and Safety |
| 13   | Aviation and Meteorology |
| 14   | Weather Products and End Use Requirements for the Pilot |
| 15   | Human Factors and Aeromedical Requirements |
Lesson 1
D  Preflight
D  Taxiing
D  Take off
D  4 Fundamentals
D  Dutch rolls, Aerodynamics demonstration
D  Landing

Lesson 2
D  Review of 4 fundamentals
D  Use of flaps
D  Use of trim
D  Power settings

Lesson 3
D  Slow flight
D  Steep turns

Lesson 4
D  Crab angles
D  Forward and side slips
D  Ground reference maneuvers
D  Passes over runway
D  Go-arounds

Lesson 5
D  Stalls
D  Passes over runway

Lesson 6
D  Emergency landings
D  Takeoffs and landings
D  VOR usage

Lesson 7
D  Takeoffs and landings

Lesson 8
D  Review of maneuvers as necessary
D  Takeoffs and landings

Lesson 9
D  Pre-solo phase check

Lesson 10
D  Review on weak areas noted on phase check
    D  Introduction to hood work

Lesson 11
D  Takeoffs and landings

Lesson 12
D  Takeoffs and landings
    D  Solo if appropriate

Lesson 13
D  2nd student solo

Lesson 14
D  Student solo to practice area

Lesson 15
D  Review of slow flight
D  Review of ground reference maneuvers
D  Soft field landings

Lesson 16
D  Student solo practice of previous lesson

Lesson 17
D  Review of steep turns
D  Review of stalls
D  Short field landings

Lesson 18
D  Student practice of previous lesson

Lesson 19
D  Navigation to random airports (pilotage)

Lesson 20
D  Student solo to another airport

Lesson 21
D  Introduction to night

Lesson 22
D  Hood work

Lesson 23
D  Dual day cross-country

Lesson 24
D  Dual Night Cross country
    D  Complete night requirements
Lesson 25
D Cross-country phase check

Lesson 26
D Review on weak areas noted on phase check

Lesson 27
D First solo cross-country

Lesson 28
D Second solo cross-country

Lesson 29
D Third solo cross-country

Lesson 30
D Begin review for practical test
D Slow flight
D Stalls.
D Unusual attitudes

Lesson 31
D Review for practical test
D Slow Flight
D Stalls
D Unusual attitudes

Lesson 32
D Review for practical test
D Steep turns
D Hood
D Soft field landings

Lesson 33
D Review for practical test
D Hood
D Short field landings

Lesson 34
D Private pilot phase check

Lesson 35
D Review areas noted to be weak on phase check

Lesson 36
D Review areas noted to be weak on phase check

Lesson 37
D Private pilot check ride
Ground Knowledge Areas

- Principles of flight
- FAR Part 61
- FAR Part 91
- National airspace system
- Aviation weather services
- Aircraft systems
- Performance and limitations
- Weight and balance
- Aeromedical factors
- Cross country flight planning

Instructor: __________________________

Student: __________________________