Select from the following: .................................................... 3
MUS 1A    Music Theory I
MUS 3    Music Fundamentals
Select from the following: .................................................... 3
ART 7    Beginning Drawing
ART 9    Beginning Painting: Oil and Acrylic
ART 10    Beginning Wheel Throwing
Select from the following: .................................................... 3
MUS 12    Music Appreciation
MUS 16    Jazz History And Appreciation
Select from the following: .................................................... 2
MUS 20    Beginning Piano: Level I
MUS 21    Beginning Piano: Level II
MUS 22    Intermediate/Advanced Piano
MUS 31    Concert Choir
MUS 33    Chamber Singers
MUS 40    Concert Band
MUS 41    Jazz Ensemble
MUS 45    College Orchestra
Total Units  20
Advisor(s): Carrera, Hicks, C. Snyder

FLIGHT SCIENCE

FLIGHT SCIENCE (MAJOR #R.8502.AS)
ASSOCIATE IN SCIENCE DEGREE
The Associate Degree in Flight Science is designed to provide students the knowledge, skills, and flight experience required to become certified commercial airplane pilots and flight instructors. Students will complete academic, simulator, and flight courses taught within the guidelines of the Federal Aviation Administration. Emphasis is placed on aeronautical decision making, flight safety, and effective teaching techniques. As courses within the degree are successfully completed, the student will earn the Private Pilot Certificate, Instrument Rating, Commercial Pilot Certificate, and Flight Instructor Certificate. Degree graduates will be ready to enter the aviation industry as commercial airplane pilots and flight instructors.

Program Learning Outcomes:
1. Apply situational awareness and decision making skills.
2. Demonstrate proficiency of take-offs, landings, and missed approaches.
3. Evaluate how day-to-day weather elements like clouds, wind, and rain affect flight operation and interpret graphic weather products such as surface analysis, weather depiction, and prognostic charts.

4. Exhibit proper emergency procedures decision-making skills.
5. Demonstrate flight proficiency during instrument approach procedures.
6. Effectively communicate with students while demonstrating proper coordination of flight controls.

Required Courses
FLGHT 101    Private Pilot 1
            Ground School ......................... 4
FLGHT 105    Private Pilot 1
            Flight Lab ............................ 1
FLGHT 106    Private Pilot 2
            Flight Lab ............................ 1.5
FLGHT 107    Private Pilot 1
            Simulation Lab ........................ 5
FLGHT 108    Private Pilot 2
            Ground School ......................... 4
FLGHT 109    Private Pilot 2
            Simulation Lab ........................ 5
FLGHT 111    Instrument Rating
            Ground School ......................... 5
FLGHT 113    Advanced Meteorology ........... 3
FLGHT 115    Instrument Rating
            Flight Lab ............................. 2
FLGHT 117    Instrument Rating
            Simulation Lab ........................ 5
FLGHT 121    Commercial Pilot
            Ground School ......................... 5
FLGHT 125    Commercial Pilot 1
            Flight Lab ............................. 2.5
FLGHT 126    Commercial Pilot 2
            Flight Lab ............................. 2.5
FLGHT 131    Flight Instructor
            Ground School ......................... 5
FLGHT 135    Flight Instructor
            Flight Lab ............................. 1.5

General Education and Graduation Requirements

Total Units  38.5
Advisor(s): Asman, Zielke
48  LANDSCAPE DESIGN

3 units, 2 lecture hours, 3 lab hours
ADVISORIES: Eligibility for Mathematics 201.
The study and implementation of the art and science
of landscape design, including principles of design, the design
process, drafting, graphics, and presentation methods. Project
emphasis is placed upon residential and small commercial sites.
(A, CSU)

383  HOME FOOD PRODUCTION

0 units, 3 lab hours
The planting, growing, harvesting, and processing
methods for various food crops including fruit trees, berry vines,
perennial and annual edible plants used in the landscape.

384  ORNAMENTAL & VEGETABLE

GARDENING PROJECTS

0 units, 3 lab hours
Application of skills in the following landscape
horticulture areas: general gardening, vegetable, greenhouse,
ornamentals, etc. Individual projects to be determined by student
interest in consultation with instructor.

ETHNIC STUDIES (ETHNST)

5  AFRICAN PEOPLE IN THE NEW WORLD

3 units, 3 lecture hours, pass/no pass (See also
History 5)
ADVISORIES: English 1A or 1AH.
This course provides a survey of the historical
contributions of African people in South America, Central America,
the Caribbean and the United States from the 16th century to the
present. (A, CSU-GE, UC, I)

32  HISTORY OF THE MEXICAN

AMERICAN PEOPLE

3 units, 3 lecture hours, pass/no pass (See also
History 32)
ADVISORIES: English 1A or 1AH.
This course traces the history of the Mexican American
people from the pre-Columbian era to the present. Topics
covered include the indigenous origins of Mexican society, the
Spanish colonial period, the Spanish and Mexican roots of the
contemporary American Southwest, and the role played by
Mexican Americans in the social, economic, political, and cultural
development of the United States from the Mexican War (1846-
1848) to the present. (A, CSU-GE, UC, I)

FILM (FILM)

1  INTRODUCTION TO FILM STUDIES

3 units, 3 lecture hours
A course demonstrating the uses of photography,
editing, and sound in the telling of film stories; it will explore
film and social issues, filmic meaning, and the main issues of
film theory and criticism. (A, CSU-GE, UC, I)

2A  HISTORY OF CINEMA: 1895-1960

3 units, 3 lecture hours
This course provides a survey of significant moments
in the creation, delivery, reception, and influence of cinema from
the 1890’s to 1960. Instruction will include the origins of film
technology and its increasing usefulness for narrative, historical
documentary, and political argument or indoctrination, and
aesthetics. Analysis will include the discovery of how technology,
society, public taste, history and social concerns shaped the
medium. (A, CSU-GE, UC, I)

2B  HISTORY OF CINEMA: 1960 TO PRESENT

3 units, 3 lecture hours
This course is a survey of significant films and
advances in the creation, reception and influence of cinema from
1960 to the present. Instruction will include the international
reach and commercial success of the film industry, the hegemony
of Western film, the maintenance and the re-tooling of Hollywood
as a labor force from the Classical period to the present. Also,
this course charts the filmic conventions and advancements of
narrative and documentary film, and how film is used as a political
argument or as indoctrination. Analyses will include varying film
criticisms from feminist to Marxist to reception theory, among
others. (A, CSU-GE, UC, I)

FLIGHT SCIENCE (FLIGHT)

101  PRIVATE PILOT 1 GROUND SCHOOL

4 units, 3 lecture hours, 3 lab hours
ADVISORIES: Mathematics 45 and English 1A or 1AH.
This lecture and lab course provides the first of two
parts of the aeronautical knowledge needed to earn a private
pilot certificate. Some of the topics covered include principles
of flight, aerodynamics, aircraft controls, engine systems, and
Federal Aviation Regulations applicable to flying under visual
flight rules. (A)
102  AVIATION HISTORY
2 units, 2 lecture hours
The Aviation History lecture course provides a historical view of aviation from the 1700’s through the modern era. Some of the topics covered will include Early Aviation, The Wright Brothers, Early Flight, World War I, Peace Time Aviation, Golden Age of Aviation, World War II, Cold War, Space Age Aviation, and Modern Aerospace. (A)

103  CAREERS IN AVIATION
2 units, 2 lecture hours
The Careers in Aviation lecture course provides an understanding of the available careers in aviation. Topics discussed in the course will include Air Transport Pilot, Charter Pilot, Flight Instructor, Aircraft Mechanic, Airport Management, Fixed Base Operations, Air Traffic Controller, and Airport Operations. (A)

104  REMOTE PILOT GROUND SCHOOL FOR SMALL UNMANNED AIRCRAFT SYSTEMS (SUAS)
1 unit, 1 lecture hour, .5 lab hours, pass/no pass
This course provides training for individuals seeking a Remote Pilot certificate to fly small Unmanned Aircraft Systems (sUAS) also known as drones. A certificated Remote Pilot may fly drones for compensation. This course will prepare students to take the written examination required for certification and provide basic experience in actual flight operations. Some of the topics covered will include applicable regulations relating to SUAS, airspace classification and operating requirements, the effects of weather on performance, loading and performance, emergency procedures, maintenance and inspections, and flying procedures. (A)

105  PRIVATE PILOT 1 FLIGHT LAB
1 unit, 3 lab hours
COREQUISITES: Flight 101 and 107. ADVISORIES: Mathematics 45 and English 1A or 1AH.
This course is the first of two portions of the flight training required to earn the Private Pilot Certificate. Some of the topics covered are fundamental flight maneuvers, performance maneuvers, and development of aeronautical decision making skills. Prior to the first day of class, students must hold a valid 3rd Class or higher FAA medical certificate. Students must also be able to read, speak, write, and understand the English language. Prior to beginning flight training, students must 1) provide TSA proof of Flight Training Eligibility and 2) receive an Airport Identification Badge from Fresno Yosemite International Airport. The cost of this course is substantial. See material fee in the current Schedule of Classes. (A)

106  PRIVATE PILOT 2 FLIGHT LAB
1.5 units, 4.5 lab hours
This course provides advanced flight training for individuals seeking to increase flight proficiency in preparation for Private Pilot Certification. Some of the topics covered will be fundamental flight maneuvers, performance maneuvers, use of navigation aids, cross country flying, and development of aeronautical decision making skills to the FAA Practical Test Standards. Students must hold a valid 3rd class (or higher) FAA medical certificate and a valid Fresno-Yosemite Airport ID Badge for the duration of this course. The cost of this course is substantial. See material fee in the current Schedule of Classes. (A)

107  PRIVATE PILOT 1 SIMULATION LAB
.5 unit, 2 lab hours
This course is an introduction to private pilot flight training through the use of simulation. Students will practice pre-solo airplane pilot flight maneuvers using Aviation Training Devices (simulators). (A)

108  PRIVATE PILOT 2 GROUND SCHOOL
4 units, 3 lecture hours, 3 lab hours
This lecture and lab course provides the second portion of the aeronautical knowledge required to earn a private pilot airplane certificate. Some of the topics covered include basic weather and weather services for pilots, navigation, radio communication, and human factors. (A)
109 **PRIVATE PILOT 2 SIMULATION LAB**

.5 unit, 2 lab hours


This is the second course using simulation for private pilot flight training. Students will practice post-solo airplane pilot maneuvers in Aviation Training Devices (simulators). Topics covers include cross country navigation and advanced flight maneuvers for the private pilot. (A, CSU)

111 **INSTRUMENT RATING GROUND SCHOOL**

5 units, 4 lecture hours, 3 lab hours


This lecture and lab course covers the aeronautical knowledge required to earn an instrument rating. Some of the topics covered will include principles of instrument flight, flight instruments, instrument navigation systems, IFR departure-enroute-arrival procedures, analyzing weather information and conditions, IFR flight planning, and IFR emergency procedures. (A)

112 **ADVANCED NAVIGATION**

2 units, 2 lecture hours


Advanced Navigation provides classroom training for individuals seeking a greater understanding of navigation concepts and techniques. Some topics covered during the course are flight planning, radio aids, radar navigation, and celestial navigation. (A)

113 **ADVANCED METEOROLOGY**

2 units, 2 lecture hours


This lecture and lab course is designed to provide an in depth look at weather and how weather relates to aviation. Some topics of discussion will be weather basics, circulation systems, weather hazards, and applying weather knowledge. This course will prepare the student for more advanced levels of aviation training. (A)

115 **INSTRUMENT RATING FLIGHT LAB**

2 units, 6 lab hours


This laboratory course provides flight training for individuals seeking an Instrument Pilot Rating. Some of the topics covered will include principles of instrument flight, flight instruments, instrument navigation systems, IFR departure-enroute-arrival procedures, analysis of weather information and conditions, IFR flight planning, and IFR emergency procedures. Students must hold a valid 3rd class (or higher) FAA medical certificate and a valid Fresno-Yosemite Airport ID Badge for the duration of this course. The cost of this course is substantial. See material fee in the current Schedule of Classes. (A)

117 **INSTRUMENT RATING SIMULATION LAB**

.5 unit, 2 lab hours


This course is an introduction to instrument flight training via the use of simulation. Students will practice flight lessons in Aviation Training Devices (simulators) that apply to instrument flight. (A)

121 **COMMERCIAL PILOT GROUND SCHOOL**

5 units, 4 lecture hours, 3 lab hours

PREREQUISITE: Flight Science 111.

This lecture and lab course provides the aeronautical knowledge required for the commercial airplane pilot certificate. Some of the topics covered include high performance powerplants, environmental and ice control systems, complex aircraft systems, advanced aerodynamics, predicting performance, controlling weight and balance, and Federal Aviation Regulations. FAA written test and flight equipment costs for this course are substantial. (A)

122 **FUNDAMENTALS OF AIR TRAFFIC CONTROL**

2 units, 2 lecture hours

ADVISORIES: Eligibility for Mathematics 201.

Fundamentals of air traffic control provides a good working knowledge of how and why the air traffic control system works. Fundamentals of air traffic control discusses the history of air traffic control, emphasizing the logic that has guided its development. It also provides current, in-depth information on navigational systems, the air traffic control system structure, control tower procedures, radar separation, national airspace system operation and the FAA’s restructured hiring procedures. (A)
123  HUMAN FACTORS & CREW RESOURCE MANAGEMENT
2 units, 2 lecture hours
ADVISORIES: Eligibility for Mathematics 201.
The Human Factors and Crew Resource Management course provides classroom instruction on the various aspects of the human body as it pertains to aviation, along with concepts in Crew Resource Management. Some topics covered will include human anatomy, flight physiology, and crew resource management. (A)

125  COMMERCIAL PILOT 1 FLIGHT LAB
2.5 units, 8 lab hours
PREREQUISITE: Flight Science 106.
This course provides flight training for individuals seeking Commercial Pilot Certification. Some of the topics covered will be commercial flight maneuvers, advanced performance maneuvers, use of navigation aids, long distance cross country flying, and development of advanced aeronautical decision making skills. Students must hold a valid 3rd class (or higher) FAA medical certificate and a valid Fresno-Yosemite Airport ID Badge for the duration of this course. The cost of this course is substantial. See material fee in the current Schedule of Classes. (A)

126  COMMERCIAL PILOT 2 FLIGHT LAB
2.5 units, 6 lab hours
This laboratory course provides flight training for individuals seeking Commercial Pilot airplane certification. Some of the topics covered are commercial flight maneuvers, advanced performance maneuvers, use of navigation aids, long distance cross country flying, and development of advanced aeronautical decision making skills. Students must hold a valid 3rd class (or higher) FAA medical certificate and a valid Fresno-Yosemite Airport ID Badge for the duration of this course. The cost of this course is substantial. See material fee in the current Schedule of Classes. (A)

131  FLIGHT INSTRUCTOR GROUND SCHOOL
5 units, 4 lecture hours, 3 lab hours
PREREQUISITE: Flight Science 121.
This lecture and lab course provides ground training for individuals seeking Flight Instructor Certification. Some of the topics covered will be fundamentals of instructing and areas of operations for a private and commercial pilot. (A)

132  ADVANCED AIRCRAFT SYSTEMS & PROPULSION
2 units, 2 lecture hours
ADVISORIES: Eligibility for Mathematics 201
Advanced Aircraft Systems and Propulsion provides knowledge of aircraft engines and related systems, fundamentals of an electrical system, hydraulic and pneumatic aircraft systems, along with aircraft instruments. This course is designed to prepare the student for advanced occupations within the aviation field. (A)

133  FEDERAL AVIATION REGULATIONS
2 units, 2 lecture hours
This course is designed to provide an in depth understanding of the Federal Aviation Regulations and use of the Aeronautical Information Manual. Topics will include pilot certification, operating rules, and the national airspace system. (A)

135  FLIGHT INSTRUCTOR FLIGHT LAB
1.5 units, 4.5 lab hours
This laboratory course provides flight training for individuals seeking Flight Instructor Certification. Some of the topics covered will be fundamentals of instructing and areas of operations for a private and commercial pilot. Students must hold a valid 3rd class (or higher) FAA medical certificate and a valid Fresno-Yosemite Airport ID Badge for the duration of this course. The cost of this course is substantial. See material fee in the current Schedule of Classes. (A)
MULTI-ENGINE PILOT FLIGHT LAB
1 unit, 3 lab hours, pass/no pass only
This laboratory course provides flight training for individuals seeking Commercial Multi-Engine Pilot Certification. Some of the topics covered will be commercial flight maneuvers, advanced performance maneuvers, use of navigation aids, long distance cross country flying, and development of advanced aeronautical decision making skills. Issuance of FAA 3rd. Class or higher medical certificate, Airport Identification Card from Fresno Yosemite International Airport, and proof of Flight Training Eligibility will be required. Substantial laboratory fees for aircraft rental and operational costs are also required. (A)

FOODS AND NUTRITION (FN)

NUTRITION AND HEALTH
3 units, 3 lecture hours, pass/no pass
Relationship of diet to physical and emotional health: nutrients, diet patterns throughout the life cycle. Optimal nutrition to reduce the risks of cancer, heart disease, allergies, and other diseases. Social, psychological, and cultural dictates which affect food selection and health. Personal strategies to develop a nutrition plan for better health. Designed for students with an interest in Food Services. Not open to students with credit in Foods and Nutrition 40, Nutrition. (A, CSU-GE, UC)

NUTRITION
3 units, 3 lecture hours, pass/no pass
ADVISORIES: Eligibility for Mathematics 201.
Nutrients and their ingestion, digestion, absorption, transport, metabolism, interaction, storage, and excretion. The relationship of diet to physical and emotional health, diet patterns through the life cycle, consumer concerns, and recent developments. (A, CSU, UC)

WEIGHT CONTROL
1 unit, 1 lecture hour, pass/no pass
Consumption of food for optimal health. Development of physical activity as part of life style. The relationship of weight control to health, causes of obesity, successful weight control techniques, and undesirable weight loss methods.

FRENCH (FRENCH)

BEGINNING FRENCH
5 units, 5 lecture hours, pass/no pass
ADVISORIES: English 1A or 1AH.
This is a beginning course in conversational and written French for non-native speakers; it is intended for students without previous exposure to French. Students will be introduced to the pronunciation, vocabulary, idioms, grammar, basic composition, and they will explore the cultures of France and other Francophone countries and regions. (A, CSU-GE, UC, I)

HIGH-BEGINNING FRENCH
5 units, 5 lecture hours, pass/no pass
PREREQUISITES: French 1, or 2 years of high school French or the equivalent. ADVISORIES: English 1A or 1AH.
This is a second-semester course in conversational and written French for non-native speakers. Students will develop grammatical structures, expand their vocabulary, and further study the cultures of France and other Francophone countries and regions. An introduction to the literary text will also be part of this course. (A, CSU-GE, UC, I)

INTERMEDIATE FRENCH
5 units, 5 lecture hours, pass/no pass
PREREQUISITES: French 2 or 3 years high school French or equivalent. ADVISORIES: English 1A or 1AH.
This is a third-semester course in conversational and written French for non-native speakers. Students will review basic grammar, further develop their oral skills and grammatical structures, and continue to expand their vocabulary. In this course, students will compose and discuss short literary texts. There will be an increased emphasis on reading and writing as tools in exploring the cultures of France and other Francophone countries and regions. (A, CSU-GE, UC, I)

HIGH-INTERMEDIATE FRENCH
5 units, 5 lecture hours, pass/no pass
PREREQUISITES: French 3 or equivalent. ADVISORIES: English 1A or 1AH.
This is a fourth-semester course in conversational and written French for non-native speakers. It continues the development of proficiency of grammar and language usage. Students will further explore current topics and cultures of France and Francophone countries and regions, as reflected in the language and literature. (A, CSU-GE, UC, I)