

**Proposal to Revise ASC Requirements for Social Science:
Air Transportation Bachelor of Arts Program**

Submitted by Nancy Ettlinger, Chair, Undergraduate Studies
Department of Geography
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SEPARATE ATTACHMENTS:

- Curriculum Map for the Air Transportation Major in Geography (referenced in section IV)
- New Advising Sheet, Air Transportation (referenced in section VIII)
- Old Advising Sheet, Air Transportation (referenced in section VIII)

**Proposal to Revise ASC Requirements for Social Science:
Air Transportation Bachelor of Arts Program**

I. Relation Between the Geography Department and the Center for Aviation Studies (CAS)

General Information

This proposal is to revise the existing Social Sciences: Air Transportation major, which was last updated in Autumn 2012. These suggested changes reflect recent curricular revisions and a refocusing of core courses in consultation with the Center for Aviation Studies (CAS).

Rationale

The Social Sciences: Air Transportation Bachelor of Arts Degree program (referred to as Air Transportation from here on) was designed by the prior department Chair, Morton O’Kelly (now Professor Emeritus), and Assistant Dean of Curriculum and Instruction, Deborah Haddad. The goals of the prior revision noted the value of a liberal arts baccalaureate for professionals entering the aviation industry, particularly in the development of critical thinking and analytical skills.

The prior ASC core in the degree were designed to allow students to use any course in each social science GE category to meet credit hour requirements, and to complete a narrow set of Geography core courses specifically related to Weather and Climate (Geog 5900) and the spatial analysis of transportation systems. Dr. O’Kelly is an expert in Transportation Geography and Geographic Information Science (GIS). Thus, the design of the Geography core reflected his research priorities, resulting in a curriculum for a well-trained transportation geographer with an emphasis on Geographic Information Systems (e.g., in a spatial database environment using ArcGIS). We want to retain the GIS courses as options but recognize that not every Air Transportation graduate will need these highly technical skills.

Eight years in, the program has matured, and the Air Transportation students have been fully integrated into our Geography department. We wish to build on this success and renew and refresh the most obvious points of connection with our discipline. We have scrutinized feedback from graduation surveys, our advisors who work closely with Air Transportation students, and the faculty who teach the required Geography core.

The Social Science: Air Transportation degree has two options: pilot and non-pilot. Staff and advisors in CAS and Geography have agreed that deeper engagement across human and physical geography can build skills toward richer and systematic options for air industry professionals. This logic fits well with the more focused set of options we want to propose on our side: a little more structure and deeper training in Human Geography (the study of people and place) and atmospheric science.

Process

Starting in Autumn 2018, the Center for Aviation Studies staff and the Undergraduate Studies Committee (UGS) in the Department of Geography both began parallel curricular revision processes. Brian Strzempowski of CAS regularly attended UGS curriculum meetings, and Darla

Munroe (Chair, Department of Geography) attended two CAS curriculum meetings. Both groups worked with Teresa Johnson, formerly Associate Director of the Drake Institute, to implement a backwards-design process, collaboratively identifying and writing program-level goals, objectives and proficiencies. In Spring 2019, we shared our overall curricular maps with a careful eye to how a BA in Geography matched the evolving needs of the Air Tran students.

II. Proposal to Institute a Pre-Major

General Information

Recent deliberations among Geography, the Center for Aviation Studies, the OSU Flight Education Program, Andrew Martin (Associate Vice Provost of Academic Affairs), and Bernadette Vankeerbergen (Assistant Dean, Curriculum), and David Tomasko (Associate Dean for Undergraduate Education and Student Services in Engineering) in November 2021 resulted in a recommendation to institute a pre-major.

Rationale

Due to an unprecedented increase in majors over the past 10 years and resulting strain on the resources at the Center for Aviation Studies/Flight Education, the Geography Department and Center for Aviation Studies request that the Social Sciences Air Transportation major be restructured to include a Pre-Major. This change will serve to stem the flow of students who wish to add the Professional Pilot Certification (PPC) to the major by implementing a competitive process to add the PPC. A finite number of flight slot spaces will be made available for Air Transportation students, and the Pre-Major will provide a transparent and fair process for students to become eligible to add the PPC specialization to their major.

Present and Proposed Curriculum

Instituting the Pre-Major will not have any curricular effect on the current major. The only change will be the coding of the major that prospective students will encounter on the Common App. The Pre-Major for Social Sciences Air Transportation will be the only option, and there will be a rubric in place to decide which students are eligible to progress to the Social Sciences Air Transportation major with the PPC specialization. Students will also have the option to progress to the major without the PPC specialization – this will *not* have a competitive process.

Process

Social Sciences Air Transportation with Professional Pilot Certification Specialization

Students will be deemed eligible to progress to the major and add the PPC specialization based on the following criteria:

- Cumulative GPA after one year of study
- A grade of B- or above in AVIATN 2100 (non-repeatable)
- A passing grade in AVIATN 2000
- A passing grade in GEOG 2400 and 3300
- An application process administered by Flight Education

Social Sciences Air Transportation *without* the Professional Pilot Certification

Any student with passing grades (C- or above) in their foundational courses (AVIATN 2000, 2100, GEOG 2400 & 3300) are eligible to progress to the non-PPC version of the major.

III. Brief Summary of Proposed Changes to Core Requirements

The logic and justification of the proposed changes to the ASC core and elective requirements is as follows:

- Retain the Geography core classes that continue to serve student needs best
- Move the two GIS methods classes (Geog 5210 Fundamentals of GIS, and Geog 5200 Cartography and Map Design) to Social Science electives
- Increase the number of Geography course offerings in the Social Science Elective category and require that students take at least 2 Geography courses to complete the Social Sciences Elective requirement. Students will have more flexibility and choices, and the Geography Department will maintain the same number of credits.
- Narrow the list of Social Science Electives outside the Geography Department to courses that Air Transportation students take regularly and find useful.
- Modify the content of courses to accommodate interests of Air Transportation students (elaborated below)

IV. Major-specific Learning Goals for the Air Transportation Major in Geography & Curriculum Map (SEPARATE ATTACHMENT)

The 7 learning goals for the Air Transportation major are the same as in the 2012 proposal (Appendix G) except for #'s 4 and 5, which are similar to those in 2012 but have been slightly revised to broaden the goals to transportation systems (including, but not limited to air transportation) by instructors of Geog. 3300 and Geog. 5300, two of the Core Geography courses in the Air Transportation major and the courses for which rubrics have been provided in this proposal. Below are the 7 goals; the 2012 goals are indicated for the revised goals (#'s 4 and 5) following each. Geography courses focus on LG 4 and 5; the other disciplines in the collaborative Air Transportation major cover the other goals. See **SEPARATE ATTACHMENT** for the **curriculum map**.

LG1. Students acquire and apply foundational knowledge from the introductory courses in the core of the major to explain flight performance as well as federal and international aviation laws and policies.

LG2. Students acquire and apply statistical skills to critically evaluate data and research findings in the literature (e.g. geospatial data analyses).

LG3. Students apply quantitative skills to understand the management and operations of aviation-specific organizations, such as aircraft manufacturers, airlines, airports, and the air traffic management system.

LG4 (current). Students acquire knowledge about the social, political, economic, and/or physical structures of transportation systems and apply it to explain individual and organizational behaviors.

LG4 (2012) Students comprehend and critically assess the social, political, economic, and/or physical structures of air transportation systems to explain individual and organizational behaviors.

LG5 (current). Students explain performance, law, regulations, and policies related to transportation systems.

LG5 (2012) Students know aviation regulations and policies and are able to anticipate their ramifications under different scenarios.

LG6. Students comprehend the structure of industry and communications flows and are able to pinpoint sources of and remedies for administrative disagreements.

LG7. Students are able to demonstrate how knowledge of advanced aircraft performance has implications for decision-making by management for airports, airlines, and aviation service providers.

V. Rubrics for LG4 and LG5, Geog. 3300 and 5300

LG4. Students acquire knowledge about the social, political, economic, and/or physical structures of transportation systems and apply it to explain individual and organizational behaviors.

LG5. Students explain performance, law, regulations, and policies related to transportation systems.

	Developing	Emerging	Proficient
Knowledges of transportation systems and their applications	Identifies basic elements of transportation systems and their physical, social, economic, and political impacts	Recognizes physical, social, economic, and political issues and various perspectives surrounding them	Articulates problems of, and prospects for, transportation systems in society
Transportation performance, law, regulations, and policies	Identifies performance indicators, as well as law, regulations, and policies related to transportation systems	Recognizes the performance of transportation systems and policies, and compliance with laws and regulations	Articulates the effectiveness of policies, laws, and regulations of the transportation systems

VI. Assessment plan for the Air Transportation major in Geography ***Assessing LG4 and LG5***

LG4. Students acquire knowledge about the social, political, economic, and/or physical structures of transportation systems and apply it to explain individual and organizational behaviors.

Direct – Embedded testing - Assignments and quizzes will be given to all students in the core courses in the Air Transportation major (e.g. GEOG 3300, GEOG 5300).

Indirect – Survey (Student) - Graduating Senior Survey

Criteria: We expect that 80% of students feel their preparation from Transportation security and Transportation Geography as adequate for success in the major.

LG5. Students explain performance, law, regulations, and policies related to transportation systems.

Direct – Embedded testing - Assignments and quizzes will be given to all students in the core courses in the Air Transportation major (e.g., GEOG 3300, GEOG 5300).

Indirect – Survey (Student) - Graduate Senior Survey

Criteria: We expect that 80% of students feel their preparation from Transportation security and Transportation Geography as adequate for success in the major.

Use of Data (how the program uses or will use the evaluation data to make evidence-based improvements to the program periodically)

- Analyze and discuss trends with the unit’s faculty
- Analyze and report to college
- Make improvements in curricular requirements (e.g. add, subtract courses)
- Make improvements in course content
- Make improvements in course delivery and learning activities within courses
- Periodically confirm that current curriculum and courses are facilitating student attainment of program goals

VII. Courses in the Air Transportation major in Geography

New Course Proposals – None

Changes to Existing Courses

Darla Munroe and members of Geography’s Undergraduate Studies Committee met with CAS staff and advisors to discuss the interests of Air Transportation majors in Geography. As a result, we moved two GIS courses from the required/core category to the Social Science Elective category. The remaining required/core courses are ones that Air Transportation students have reported to be useful and interesting.

The content of one course, Geog 5300 (Geography of Transportation) has changed to focus more on applications than methods, as elaborated below.

Course Descriptions

REQUIRED COURSES

GEOG 5300, Geography of Transportation

This course previously served both Air Transportation majors and Geography graduate students focused on advanced methods in transportation geography such as spatial interaction, network analysis, allocation, and demand modeling. Based on a discussion with CAS on the broader context of Air Transportation training, professional development, and the need for certain skills and knowledges, we updated GEOG 5300 to better serve the Air Transportation majors. The course now focuses on transportation applications rather than methods, and covers multimodal transportation systems, including air, land, freight, and passenger transportation. Students

learn the theories, applications, and real-world issues related to transportation in connection to social, environmental, and economic systems. The course lays the foundation for a broad perspective in transportation and complements aviation courses in the Air Transportation curriculum.

ELECTIVE COURSES

Geog 2200.01, Mapping Our World

This course is an introduction to the power of maps, covering spatial representation, visual literacy, and geographic information technology in a global society. For students who desire basic spatial analysis and mapping skills, this course builds geographic literacy (this course is a more basic version of the content of 5200 and 5210, listed below).

GEOG 3750, Geography of North America

This course focuses on geographical analysis of North America; spatial patterns and processes associated with culture, politics, economy, and social difference at international, national, regional and urban scales. Similarly, this course builds experience analyzing current trends in North America and should be broadly useful to industry professionals.

Geog 3900, Global Climate Change: Causes & Consequences

This course examines the natural and human factors that force changes in our climate and environment and explores strategies for a sustainable environment in the future. CAS staff and advisors indicated that CAS staff and advisors indicated that adding an additional elective for further knowledge on climate change and sustainability strategies is desired by Air Transportation students.

Geog 5200, Cartography & Map Design

A study of the cartographic techniques of map compilation and design including generalization, symbolization, reproduction, and GIS-based mapping with an emphasis on thematic mapping. This course formerly was required; we are moving it to the elective list for those students who wish to build skills in digital mapping.

Geog 5210, Fundamentals of GIS

Basic principles of geographic and land information systems and their use in spatial analysis and information management. This course formerly was required; we are moving it to the elective list for those students who wish to build skills in geographic databases.

GEOG 5301, Sustainable Transportation

A module was added to this course on aviation, specifically sustainability aspects of aviation in intercity transportation.

VIII. Implementation Plan for Changes

Reallocation of Credit Hours from Old to New Advising Sheets

GEOG 5200 and 5210 have been removed from the Core/Required section of the old advising sheet, and have been added to the Social Science Elective part of the major along with other

geography courses. Air Transportation majors enroll in 4 Social Science Electives courses, two of which must now be from Geography; the remaining 2 are from two of the other 3 categories. Aviation electives are increased from 9 to 12 specifically for students *not* pursuing Professional Pilot Certification; this change was driven by CAS.

See **SEPARATE ATTACHMENTS** for the new advising sheet and the old advising sheet

Implementation Plan for Existing Students

Only new Air Transportation students (incoming freshmen, transfer, or major changers) will be allowed to follow the updated curriculum beginning the semester of implementation. All current Air Transportation students will continue to follow the old curriculum.

Sample 4-Year Timeline for Bachelor of Arts Degree in Social Sciences Air Transportation (for students not pursuing the pilot certification option)

First Year	Autumn		Spring	
	Aviation 2000	3	Aviation 2200	3
	Aviation 2100	5	Geography 3300*	3
	Geography 2400	3	Foreign Language GE	4
	English 1110	3	Math GE	4
	ARTSSCI 1100.14	1		
	Total Credit Hours	15	Total Credit Hours	14
Second Year	Autumn		Spring	
	Aviation 2300	3	Aviation 3000	3
	Foreign Language GE	4	Foreign Language GE	4
	2 nd Writing GE	3	Social Science Elective	3
	Data Analysis GE	3	History GE	3
	Aviation Elective	3	Aviation Elective	3
	Total Credit Hours	16	Total Credit Hours	16
Third Year	Autumn		Spring	
	Aviation 3200	3	Aviation 3300	3
	Geography 5300*	3	Visual & Performing Arts GE	3
	Natural Science GE w/Lab	4	Social Science Elective	3
	Social Science Elective	3	Open Options GE	3
	Aviation Elective	3	Natural Science (no lab)	3

Total Credit Hours		16	Total Credit Hours	15
Fourth Year	Autumn		Spring	
	Geography 5900*	3	Aviation 4500	3
	Social Science Elective	3	Cultures & Ideas/Global Studies GE	3
	Natural Science (no lab)	3	Open Options GE	3
	Social Science GE	3	Aviation Elective	3
	Literature/US Diversity GE	3	Social Science GE	3
	Total Credit Hours	15	Total Credit Hours	15

Note: Students should plan carefully to overlap Social Diversity GE and Global Studies GE with other GE categories to allow more flexibility if pursuing a minor.

Impacts on other courses

In consultation with CAS staff and advisors, we deleted several courses from the list of electives from other ASC departments (outside Geography) because Air Transportation infrequently enroll in these courses; accordingly, we anticipate no impact. The deleted courses include PSYCH 4309 and 4508; SOC 3302, 2370, 3315; and ECON 3048, 4600, 4700, 5850. We have a refocused (smaller) set of ASC GE electives that reflect courses that Air Transportation students have found most useful per our discussions with CAS staff and advisors.

Social Sciences Air Transportation (Bachelor of Arts)

Air Transportation Major

Requires 122 Credit Hours

Air Transportation Major with Professional Pilot Certification (PPC)

Requires 133 Credit Hours

GENERAL EDUCATION

College of Arts & Sciences Bachelor of Arts general education requirements apply.

Please visit <https://artsandsciences.osu.edu/academics/current-students/advising/ge>

CORE COURSES (12 courses)

Course	Title	Hours
AVIATN 2000	Intro to the Aviation Industry	3
AVIATN 2100	Private Pilot Fundamentals	5
AVIATN 2200	Aviation Communication	3
AVIATN 2300	Aviation Performance & Weather	3
AVIATN 3000	Aviatn Management & Marketing	3
AVIATN 3200	Aviation Regulations	3
AVIATN 3300	Aviatn Human Factors & Safety	3
AVIATN 4500	Aviation Capstone	3

Course	Title	Hours
GEOG 2400	Economic & Social Geography	3
GEOG 3300	Transportation Security	3
GEOG 5300	Geography of Transportation	3
GEOG 5900	Weather, Climate & Global Warming	3

AVIATION ELECTIVES

For Non-PPC Majors (12 credit hours)

Course	Title	Hours
AVIATN 2101	Private Pilot Flight Lab I	2
AVIATN 2102	Private Pilot Flight Lab II	2
AVIATN 2900	Air Traffic Control Fundamentals	3
AVIATN 3193	Individual Studies in Aviation	2-5
AVIATN 3400	Aviation Accident Investigation	3
AVIATN 3500	Airline Labor Relations	3
AVIATN 3600	Business & Corporate Aviation Management	3
AVIATN 3700	Building a Diverse Workforce in Aviation	3
AVIATN 4000	Air Transportation Analysis	3
AVIATN 4193	Individual Studies in Aviation	2-5
AVIATN 4200	Aviation Dispatch Fundamentals	3
AVIATN 4201	Aviation Aircraft Dispatch	3
AVIATN 4400	Airport Management	3
AVIATN 5000	Air Transportation Analysis II	3
AVIATN 5193	Individual Studies in Aviation	2-5
AVIATN 5194	Group Studies in Aviation	2-5

Professional Pilot Certification (PPC)

(22-24 hours)

Course	Title	Hours
AVIATN 2101	Private Pilot Flight Lab I	2
AVIATN 2102	Private Pilot Flight Lab II	2
AVIATN 2501	Commercial Cross Country Flight Lab	2
AVIATN 3100	Instrument Flight Fundamentals	3
AVIATN 3101	Instrument Flight Lab	3
AVIATN 4100	Commercial Flight Operations	3
AVIATN 4101	Commercial Pilot Flight Lab	3
AVIATN 4300	Advanced Multi-Engine Operations	2

AVIATN 4301	Commercial Pilot MEL Flight Lab	2
OR		
AVIATN 5100	Flight Instruction Methodology	2
AVIATN 5101	Flight Instructor ASE Flight Lab	2

The following courses are available, but not required:

AVIATN 5200	Instrument Instruction Methodology	2
AVIATN 5201	Instrument Instruction Flight Lab	1
AVIATN 5102	Flight Instructor AME Flight Lab	1

SOCIAL SCIENCE ELECTIVES (12 credit hours)

Requirements for Social Science Electives
Students must complete four courses from the lists provided. Two courses <i>must</i> be from the Geography category, the remaining from two other categories.

GEOGRAPHY		
Course	Title	Hours
GEOG 2200.01	Mapping Our World	3
GEOG 3600	Space, Power & Political Geography	3
GEOG 3701	The Making of the Modern World	3
GEOG 3702	Life & Death Geographies	3
GEOG 3750	Geography of North America	3
GEOG 3900	Global Climate Change: Causes & Consequences	3
GEOG 5200	Cartography	3
GEOG 5210	Fundamentals of GIS	3
GEOG 5301	Sustainable Transportation	3
GEOG 5700	Geography of Development	3
GEOG 5802	Globalization & Environment	3

INDIVIDUAL & SOCIAL		
COMM 2367	Persuasive Communication	3
COMM 2331	Strategic Communication Principles	3
COMM 3331	Communication in Decision Making	3
COMM 3545	Human-Computer Interaction	3
INTSTD 5195	Selected Topics in Int'l Studies	3
POLITSC 2150	Voters & Elections	3

INSTITUTIONS		
Course	Title	Hours
COMM 2540	Intro to Communication Technology	3
COMM 3325	Intro to Organizational Communication	3
COMM 3668	Intercultural Communication	3
COMM 3443	Global Media	3
INTSTD 4800	Cultural Diplomacy	3
INTSTD 5800	International Law	3
POLITSC 3115	Intro to the Policy Process	3
POLITSC 4200	Politics of Modern Democracies	3
SOC 2309	Intro to Law & Society	3

SECURITY		
Course	Title	Hours
COMM 3330	Communication & Conflict Management	3
COMM 3597.02	Media & Terrorism	3
INTSTD 3701	Intro to Homeland Security	3
INTSTD 4700	Terror & Terrorism	3
POLITSC 4318	Politics of Int'l Terrorism	3
PSYCH 4525	Psychology of Personal Security	3

Major Requirements

The following requirements for the major apply to all Arts and Sciences degrees.

- **Major requirements comprise at least 30 semester hours and can be substantially higher.** Major courses must be at the 2000 level or above. At least 20 hours of the major must be in courses offered by the department of the major. Note: Some interdisciplinary majors are excluded from the 20-hour rule.
- **Students must earn at least a C- in a course for the course to be applied to the major.** However, students must receive a 2.0 cumulative grade point average (GPA) for all major course work. If a D+, D, or an E is earned in a course needed for the major, the course cannot be counted on the major. The major advisor will decide if the course should be repeated or if another course should be substituted. Courses taken on a pass/non-pass basis cannot be used on the major.
- **The department must approve all courses in the major.** Some departments require a "major program form," a document that must be signed by the academic advisor and submitted with the graduation application. Some departments do not require such a form because the academic advisors use an automated version on the degree audit report. Some departments require both. In any case, students should meet with the academic advisor early to plan the major; during your meeting, it can be determined whether the department requires a paper major program form. Any changes or adjustments to the major should be made in consultation with the academic advisor.
- **If a student transferred from another institution, no more than half of the credit hours on the major program may consist of transfer credit.** The academic advisor, the chairperson of the department, and the appropriate assistant dean must approve any request for a variation in this policy.

For Honors students, the GE curriculum and major must be approved by the assigned Honors advisor. Information about the honors curriculum and requirements and how to schedule an appointment with an honors advisor is available on the College of Arts and Sciences Honors Program website: <http://aschonors.osu.edu/advising>. Students will also be assigned a faculty advisor in the department of study to help the student choose courses and co-curricular opportunities that align with academic and professional goals.

Social Sciences Air Transportation (Bachelor of Arts)

Air Transportation Major

Requires 124 Credit Hours

Air Transportation Major with Professional Pilot Certification (PPC)

Requires 139 Credit Hours

GENERAL EDUCATION

College of Arts & Sciences Bachelor of Arts general education requirements apply.

Please visit <https://artsandsciences.osu.edu/academics/current-students/advising/ge>

CORE COURSES (14 courses)

Course	Title	Hours
AVIATN 2000	Intro to the Aviation Industry	3
AVIATN 2100	Private Pilot Fundamentals	5
AVIATN 2200	Aviation Communication	3
AVIATN 2300	Aircraft Performance & Weather	3
AVIATN 3000	Aviation Management & Marketing	3
AVIATN 3200	Aviation Regulations	3
AVIATN 3300	Aviation Human Factors & Safety	3
AVIATN 4500	Aviation Capstone	3

Course	Title	Hours
GEOG 2400	Economic & Social Geography	3
GEOG 3300*	Transportation Security	3
GEOG 5200	Cartography & Map Design	3
GEOG 5210	Fundamentals of Geographic Information Systems	3
GEOG 5300*	Geography of Transportation	3
GEOG 5900*	Weather, Climate & Global Warming	3

* Indicates course is offered only one term per year.

AVIATION ELECTIVES

For Non-PPC Majors (9 credit hours)

Course	Title	Hours
AVIATN 2101	Private Pilot Flight Lab I	2
AVIATN 2102	Private Pilot Flight Lab II	2
AVIATN 2900*	Air Traffic Control Fundamentals	3
AVIATN 3193	**Individual Studies in Aviation	2-5
AVIATN 3400*	Aviation Accident Investigation	3
AVIATN 3500*	Airline Labor Relations	3
AVIATN 3600*	Business & Corporate Aviation Management	3
AVIATN 3700*	Building a Diverse Workforce in Aviation	3
AVIATN 4000*	Air Transportation Analysis I	2-5
AVIATN 4193	**Individual Studies in Aviation	3
AVIATN 4200*	Aviation Dispatch Fundamentals	3
AVIATN 4201*	Applied Aircraft Dispatch	3
AVIATN 4400*	Airport Management	3
AVIATN 5000*	Air Transportation Analysis II	3
AVIATN 5193	** Individual Studies in Aviation	2-5
AVIATN 5194	**Group Studies in Aviation	2-5

* Indicates course is offered only one term per year.

** Must be approved in advance by Geography Department to apply to major.

For Professional Pilot Certification (PPC)

Students pursuing the PPC will work with the Center for Aviation Studies Advisor for enrollment in all flight lab courses.

Course	Title	Hours
AVIATN 2101***	Private Pilot Flight Lab I	2
AVIATN 2102	Private Pilot Flight Lab II	2
AVIATN 2501	Commercial Cross Country Flight Lab	2
AVIATN 3100	Instrument Flight Fundamentals	3
AVIATN 3101***	Instrument Flight Lab	3
AVIATN 4100	Commercial Flight Operations	3
AVIATN 4101***	Commercial Pilot Flight Lab	3
AVIATN 4300*	Advanced Multi-Engine Operations	2

Select from the following (4301 OR 5100 & 5101):

AVIATN 4301***	Commercial Pilot MEL Flight Lab	2
OR		
AVIATN 5100	Flight Instruction Methodology	2
AVIATN 5101***	Flight Instructor ASE Flight Lab	2

The following courses are available, but not required for degree completion:

AVIATN 5200	Instrument Instruction Methodology	2
AVIATN 5201	Instrument Instruction Flight Lab	1
AVIATN 5102	Flight Instructor AME Flight Lab	1

SOCIAL SCIENCE ELECTIVES (12 credit hours)

Requirements for Social Science Electives

Student must complete four courses from the lists provided (one from each category and a fourth from category of choice).

Social Science Elective courses that are also approved GE Courses can overlap with the GE category for which they have been approved.

Any Social Science Elective course that is not an approved GE course can overlap with the GE Social Science and GE Open Option categories only.

Security		
Course	Title	Hours
COMM 3330	Communication & Conflict Management	3
COMM 3597.02	Media & Terrorism	3
INTSTD 3701	Introduction to Homeland Security	3
INTSTD 4700	Terror and Terrorism	3
POLITSC 4318	Politics of International Terrorism	3
PSYCH 4525	Psychology of Personal Security	3
SOC 3315	Sociology of Terrorism	3

Individual & Social		
Course	Title	Hours
COMM 2367	Persuasive Communication	3
COMM 2331	Strategic Communication Principles	3
COMM 3331	Communication in Decision Making	3
COMM 3545	Human-Computer Interaction	3
GEOG 3600	Space, Power & Political Geography	3
GEOG 5700	Geography of Development	3
INTSTD 5195	Selected Topics in International Studies	3
POLITSC 2150	Voters & Elections	3
PSYCH 4309	Human Motor Control & Learning	3
PSYCH 4508	> Psychology of Judgment & Decision Making	3
PSYCH 4521	> Personnel Psychology	3
SOC 3302	Technology & Global Society	3
SOC 2370	Social Psychology in Sociological Perspective	3

Institutions		
Course	Title	Hours
COMM 2540	Intro to Communication Technology	3
COMM 3325	Intro to Organizational Communication	3
COMM 3668	Intercultural Communication	3
COMM 3443	Global Media	3
ECON 3048	> Ethics & Social Responsibility in Economic Life	3
ECON 4600	International Economic Relations	3
ECON 4700	> Government & Business	3
ECON 5850	> Labor Economics	3
GEOG 3701	The Making of the Modern World	3
GEOG 3702	Life & Death Geographies: Global Population	3
GEOG 5802	Globalization & Environment	3
INTSTD 4800	Cultural Diplomacy	3
INTSTD 5800	International Law	3
POLITSC 3115	Intro to the Policy Process	3
POLITSC 4200	Politics of Modern Democracies	3
SOC 2309	Intro to Law & Society	3

> Indicates course has a prerequisite.

Major Requirements

The following requirements for the major apply to all Arts and Sciences degrees.

- **Major requirements comprise at least 30 semester hours and can be substantially higher.** Major courses must be at the 2000 level or above. At least 20 hours of the major must be in courses offered by the department of the major. Note: Some interdisciplinary majors are excluded from the 20-hour rule.
- **Students must earn at least a C- in a course for the course to be applied to the major.** However, students must receive a 2.0 cumulative grade point average (GPA) for all major course work. If a D+, D, or an E is earned in a course needed for the major, the course cannot be counted on the major. The major advisor will decide if the course should be repeated or if another course should be substituted. Courses taken on a pass/non-pass basis cannot be used on the major.
- **The department must approve all courses in the major.** Some departments require a "major program form," a document that must be signed by the academic advisor and submitted with the graduation application. Some departments do not require such a form because the academic advisors use an automated version on the degree audit report. Some departments require both. In any case, students should meet with the academic advisor early to plan the major; during your meeting, it can be determined whether the department requires a paper major program form. Any changes or adjustments to the major should be made in consultation with the academic advisor.
- **If a student transferred from another institution, no more than half of the credit hours on the major program may consist of transfer credit.** The academic advisor, the chairperson of the department, and the appropriate assistant dean must approve any request for a variation in this policy.
- **For Honors students, the GE curriculum and major must be approved by the assigned Honors advisor.** Information about the honors curriculum and requirements and how to schedule an appointment with an honors advisor is available on the College of Arts and Sciences Honors Program website: <http://aschonors.osu.edu/advising>. Students will also be assigned a faculty advisor in the department of study to help the student choose courses and co-curricular opportunities that align with academic and professional goals.