

Status: PENDING

PROGRAM REQUEST
Social Sciences Air Transportation

Last Updated: Fink, Steven Scott
04/16/2012

Fiscal Unit/Academic Org Geography - D0733
Administering College/Academic Group Arts and Sciences
Co-administering College/Academic Group
Semester Conversion Designation New Program/Plan
Proposed Program/Plan Name Social Sciences Air Transportation
Type of Program/Plan Undergraduate bachelors degree program or major
Program/Plan Code Abbreviation GEOGTPN
Proposed Degree Title Social Sciences Air Transportation

Credit Hour Explanation

Program credit hour requirements		A) Number of credit hours in current program (Quarter credit hours)	B) Calculated result for 2/3rds of current (Semester credit hours)	C) Number of credit hours required for proposed program (Semester credit hours)	D) Change in credit hours
Total minimum credit hours required for completion of program				124	
Required credit hours offered by the unit	Minimum			18	
	Maximum			24	
Required credit hours offered outside of the unit	Minimum			100	
	Maximum			106	
Required prerequisite credit hours not included above	Minimum			0	
	Maximum			0	

Program Learning Goals

Note: these are required for all undergraduate degree programs and majors now, and will be required for all graduate and professional degree programs in 2012. Nonetheless, all programs are encouraged to complete these now.

Program Learning Goals

- 1. 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.
- 2. Students acquire and apply statistical skills to critically evaluate data and research findings in the literature (e.g. geospatial data analyses).
- 3. 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.
- 4. Students comprehend and critically assess the social, political, economic, and/or physical structures of air transportation systems to explain individual and organizational behaviors.
- 5. Students know aviation regulations and policies and are able to anticipate their ramifications under different scenarios.
- 6. Students comprehend the structure of industry and communications flows and are able to pinpoint sources of and remedies for administrative disagreements.
- 7. 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.

Assessment

Assessment plan includes student learning goals, how those goals are evaluated, and how the information collected is used to improve student learning. An assessment plan is required for undergraduate majors and degrees. Graduate and professional degree programs are encouraged to complete this now, but will not be required to do so until 2012.

Is this a degree program (undergraduate, graduate, or professional) or major proposal? Yes

Does the degree program or major have an assessment plan on file with the university Office of Academic Affairs? No

DIRECT MEASURES (means of assessment that measure performance directly, are authentic and minimize mitigating or intervening factors)

Classroom assignments

- Embedded testing (i.e. specific questions in homework or exams that allow faculty to assess students' attainments of a specific learning goal)
- Other classroom assessment methods (e.g., writing assignments, oral presentations, oral exams)

Evaluation of a body of work produced by the student

- Capstone course reports, papers, or presentations

INDIRECT MEASURES (means of assessment that are related to direct measures but are steps removed from those measures)

Surveys and Interviews

- Student survey
- Student interviews or focus groups

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/school
- 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

Program Specializations/Sub-Plans

If you do not specify a program specialization/sub-plan it will be assumed you are submitting this program for all program specializations/sub-plans.

Pre-Major

Does this Program have a Pre-Major? No

Attachments

- Aviation support ltr - Steinmetz.pdf: Exec Dean Letter
(Letter from the College to OAA. Owner: Haddad, Deborah Moore)
- Soc Sci Air Transportation Major.pdf: Proposal & Concurrences
(Program Proposal. Owner: Haddad, Deborah Moore)
- Panel Chair cover letter Air Transp Major_2012-03-19.doc: ASCC SBS Panel Chair--Cover letter
(Other Supporting Documentation. Owner: Vankeerbergen, Bernadette Chantal)

Comments

- NOTE: This is a substantially re-envisioned conversion from the quarter-system SBS Aviation major. *(by Haddad, Deborah Moore on 04/13/2012 12:42 PM)*

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Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Haddad, Deborah Moore	02/17/2012 11:59 AM	Submitted for Approval
Approved	Sui, Dianzhi	02/17/2012 12:07 PM	Unit Approval
Approved	Haddad, Deborah Moore	02/17/2012 12:11 PM	College Approval
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Pending Approval	Smith, Kelly Bott Cameron, Erin Marie Soave, Melissa A	04/16/2012 05:02 PM	CAA Approval



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February 14, 2012

W. Randy Smith
Vice Provost for Academic Affairs
203 Bricker Hall
190 North Oval Mall
CAMPUS

Dear Randy:

I am pleased to submit for your consideration a proposal for the revision of the Aviation major. A review of the existing program revealed that the major program had drifted substantially from the objectives that had been the basis for its establishment in 1982. The proposed program, to be renamed Social Sciences Air Transportation, reshapes the major curriculum so that it returns to the goal of providing for the social scientific study of the air transportation industry and aviation generally.

We have consulted extensively over the past year with the chair of the former Department of Aviation and with the director of the new Center for Aviation Studies. The program has been strengthened by this collaboration, and graduates from the program will be well prepared to pursue management, scientific, research, and other postgraduate plans.

This proposal has the support of the College of Engineering and the Fisher College of Business, both of which also offer aviation programs at Ohio State. The revision of this program has been long overdue, and I gladly endorse its adoption.

Sincerely,

Joseph E. Steinmetz, Ph.D.
Executive Dean and Vice Provost
College of Arts and Sciences



Bruce. A Weinberg

Department of Economics
Ohio State University
1945 North High Street
Columbus, OH 43210-1172

March 19, 2012

Phone: (614) 292-5642
Fax: (614) 292-3906

Professor William Masters
E-mail to: Vankeerbergen.1@osu.edu

Dear Mitch:

This letter is to accompany the proposed **Social Science Aviation Major**. The major has a rather long and not entirely positive history, but has been completely redesigned. The SBS subcommittee discussed this proposed major at length at its meeting on March 1 and asked Morton O'Kelly to provide some perspective on it at our March 15 meeting, which he did at length.

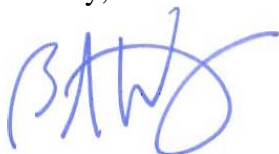
The issues we discussed at our meetings include:

- **Background:** Air Transportation is an important sector of the economy. The industry and FAA are increasingly emphasizing a well and broadly educated work force in this field, including knowledge of culture, geography, political science, and other fields.
- **The extent to which the ASC / SBS content are integrated into the major:** Aviation electives will provide core knowledge in aviation. The core itself is heavily weighted to aviation and geography (e.g., climatology, transportation security, cartography). The SBS electives are relevant for aviation (if not on aviation) and provide the breadth of knowledge that is of increasing interest.
- **The extent to which the major relies on a single instructor:** The geography core courses are also part of the geography major so they will always be taught by someone.
- **How this major compares to those offered at other institutions:** Although Purdue is the only peer institution that offers an Aviation major, the other institutions offering majors have considerable expertise in the area. Additionally, other peers and aspirational peers offer transportation programs, including Berkeley, MIT, UC Davis, UC Santa Barbara, Texas Tech). Ohio State's program would stand out because it would be broader and more steeped in ASC / SBS courses.
- **What this major does for the college/the university:** (1) There is an existing demand for this major. (2) This major would be a rigorous alternative to obtaining one's commercial flight pilot license through pilot school. That is, there would be an integration of aviation training with broader social science background. This is a new way of approaching aviation training, which could provide a template for other institutions.
- **How this major fits into broader university initiatives:** Several university initiatives are: (1) The Center for Aviation Studies, founded with support from NetJets, is connected with FAA/aviation world and has done a lot to expand the aviation program at OSU. (2) Ohio State has Don Scott flight school, a unique resource. (3) The FAA has a program that fosters collaboration among academic institutions; Ohio State's partners in this program are Berkeley,

MIT, and other peers and aspirational peers. In a nutshell, Ohio State is very much involved in aviation initiatives these days. (4) This major is in keeping with the University's emphasis on interdisciplinarity / cross-disciplinarity.

Based on this discussion, the subcommittee approved the major unanimously at our March 15 meeting. We are working to have Morton attend the ASCC meeting where this major will be discussed so that he can provide the same valuable context to the ASCC that he provided to the SBS subcommittee.

Sincerely,

A handwritten signature in blue ink, appearing to read 'BAW', with a large, stylized flourish extending from the end.

Bruce A. Weinberg
Professor and Director of Undergraduate Studies

SOCIAL SCIENCES AIR TRANSPORTATION MAJOR A PROPOSED REVISION TO THE SBS AVIATION MAJOR

1. GENERAL INFORMATION

This proposal is to revise the existing Social and Behavioral Sciences (SBS) Aviation major. The title of the revised program would be ***Social Sciences: Air Transportation*** and completion of the program would lead to a Bachelor of Arts degree. We hope to be able to offer the revised program in Autumn 2012.

2. RATIONALE

A liberal arts baccalaureate program as a preparation for professionals in the aviation sector is widely recognized and, indeed, has been incentivized recently through recognition by the FAA that education in college aviation programs is becoming essential. A well-prepared workforce, people with critical thinking and analytical skills, is vital to this important sector of the economy.¹

The air transportation industry has become much more sophisticated in recent decades, particularly in areas of security, management, and national and international political economic impact. At a recent Transportation Research Board (TRB) meeting in a session on aviation security, for instance, a consideration of human factors in the aviation industry is no longer about seat comfort and ergonomic controls. Instead, social and behavioral issues are at the forefront as researchers and policymakers consider security screening and deception detection.

There is demand for this type of major at OSU and, given that a comprehensive liberal arts program delivering the major may be considered cutting-edge and preferred, we expect demand to increase. For these and other reasons, we have reviewed the existing SBS Aviation major program and propose its revision.

The current SBS Aviation major program has drifted substantially from the objectives that were the bases for its establishment in 1982, and these curricular changes over time have resulted in a program that is seriously deficient pedagogically in terms of any social science discipline. Originally, the social science contribution to this major reflected, in large part, the research interests of two cognitive psychologists who were on faculty in the Department of Psychology. Both have long since left the University and the courses they had offered have changed or are no longer offered.

Over time, fewer and fewer social science courses were part of the SBS Aviation curriculum as preparation for pilot certification became a greater focus of the program. Curricular changes to the SBS Aviation major were implemented without the knowledge of either the College of Arts and Sciences (ASC) or the College of Engineering, where the Department of Aviation resided. Today, a student majoring in SBS Aviation can graduate without ever having had a single social science course. As of July 13, 2011, SBS discontinued accepting new students into the major.

The purpose of this proposal is to reshape the SBS Aviation curriculum so that students who declare a social sciences Aviation major may be assured that they will receive a social sciences approach to

¹ In an economic impact study prepared for Airports Council International in January 2012, the 490 *commercial* airports alone in the US support 10.5 million jobs, create an annual payroll of \$365 billion, and produce an annual output of \$1.2 trillion. See <http://airportsforthefuture.org/wp-content/uploads/2012/02/Economic-Impact-of-Commercial-Airport-2010-final.pdf>.

understanding the way in which air transportation systems affect and are affected by governments and their policies. Air transportation is an important consideration for national and international policymakers especially with respect to security, trade, and recovery/rebuilding following disasters. Industry and organizational structures, processes, communications, economic impact, and more are the subjects of scholarship in this area. Titles of recent academic papers from the Air Transport Research Society (ATRS) provide sound evidence that methods and analyses from the social sciences are critical to the study of aviation and to air transportation systems (see Appendix A).

Demand for this program has been steady, ranging from 125 to 150 SBS Aviation majors at any given time.² We expect this interest to increase going forward, however, as the Center for Aviation Studies (CAS) replaces the Aviation Department at the end of the year.³ The objective of the Center will be to strengthen the academic curriculum with a research component, which is projected to grow as the program moves forward. The demand for Aviation employees is growing worldwide and the establishment of the Center is expected to give us more visibility in the Aviation industry.

Since February 2010, representatives from ASC, Engineering, Aviation, and Geography have met and exchanged ideas on how to offer Aviation majors the education required for a degree in the Arts and Sciences while continuing to provide the knowledge and skills that are tailored for a career in the aviation industry. We feel that this proposal to revise the major meets this challenge.

Existing vs. Proposed Program

The structure of the existing SBS Aviation curriculum is juxtaposed with the proposed curriculum in Appendix B.⁴ The existing program has three components: an Aviation Core, Aviation Electives, and Aviation Management Courses. Of the eight courses required in the Core, seven are Aviation courses and one is an accounting course. All of the Elective course options are Aviation courses. In the third category, majors must choose six of the eight Management options; six of the options are Aviation courses and two are social science courses. With only two social science courses in the curriculum, and neither of these are required, the existing program is not a social sciences program.

The proposed program is composed of three components as well: the Core courses (including a capstone course), Aviation Electives, and Social Science Electives. Within the Social and Behavioral Sciences division of Arts and Sciences, Geography is the most logical host for the major revision. The department has a strong emphasis on transportation and other ancillary subject areas which directly reflect the needs of students interested in the aviation field (meteorology, mapping, business, structure of global connections). Given these well-suited offerings, six of the required core courses in this proposed revision are from the Geography Department. Rather than relying on the specific research interests of individual faculty, this proposed revision to the major relies on the existing, durable, and sustainable transportation-related scholarship in the discipline of Geography. The Aviation courses in the Core will continue to offer course content that is offered in the existing Aviation Core, but expanded coverage of the material will be possible under the semester system.

² The College of Engineering offers an Aviation BS program, and Fisher College of Business students can add an Aviation specialization to the BSBA program. Generally, though, SBS Aviation majors constitute 70% to 80% of all Aviation students on campus.

³ The CAS will not be a tenure-initiating unit (TIU), and Aviation's faculty will have new homes in the College of Engineering. The CAS Director will be a faculty member in the College of Engineering reporting directly to the Dean of the College of Engineering. SBS has concurred with the proposal, as has the Fisher College of Business (FCOB).

⁴ The existing SBS Aviation major is a quarter-system program. For the sake of comparison with the proposed program, quarter-system credit hours have been replaced with the appropriate semester-converted hours for the existing program in Appendix B.

Aviation is a diverse field, and this proposal incorporates courses from other social science disciplines: Communication, Economics, International Studies, Political Science, Psychology, and Sociology. Four courses from these other areas will satisfy one of two major electives categories. Similarly, students will choose four courses from among Aviation Electives. There is a variety of course options for both categories of electives, and students will have ready access to both Aviation and Geography advisors to consult about the set of electives that provide the best preparation for their post-graduation plans (see below for more information on advising).

The Aviation component of this proposed curriculum delivers education on the fundamentals of aviation and the air transportation system. The required core aviation courses include fundamentals of aviation, aviation communication practices, advanced aircraft performance, aviation-specific policies and regulations, aviation human factors and safety, and the management of aviation and air transportation systems. Aviation-specific electives include advanced courses in airline and airport management, advanced aircraft systems, and the opportunity to engage in aviation education through laboratories within aircraft themselves, as well as the opportunity to earn certified flight ratings through a Federal Aviation Administration approved collegiate flight education curriculum. Overall, the aviation portion of the program provides students with the necessary education to have successful careers with aviation industries, including airlines, airports, and aviation service providers. In addition, the combination of a strong social science education and a specified aviation curriculum prepares the students for graduate level education specializing in aviation-related studies in the social sciences, such as human factors, international relations, and air transportation industry management.

Jobs in airline/airport management, air traffic control, marketing, travel logistics, aviation law, and public relations are but a few careers students can prepare for via a well-rounded curriculum. The aviation sector is widely interconnected with the economy and so we believe an appropriately broad training and education makes sense as a preparation for students.

3. LEARNING GOALS AND EVALUATION OF THE PROGRAM

The following provides the learning goals of the program as well as the learning outcomes that would constitute evidence that those goals are being achieved:

1. Students have fundamental knowledge about air transportation systems.
 - 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.
2. Students improve statistical skills.
 - Students acquire and apply statistical skills to critically evaluate data and research findings in the literature (e.g. geospatial data analyses).
 - 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.
3. Students improve and apply social scientific analytical skills.
 - Students comprehend and critically assess the social, political, economic, and physical structures of air transportation systems to explain individual and organizational behaviors.

4. Students will have aviation industry-specific knowledge.
 - Students know aviation regulations and policies and are able to anticipate their ramifications under different scenarios.
 - Students comprehend the structure of the industry and communications flows and are able to pinpoint sources of and remedies for administrative disagreements.
 - 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.

The learning outcomes identified above will be assessed using both direct and indirect measures:

Direct Measures:

- One Aviation core course and one Geography core course will be chosen for embedded testing during the first and second years.
 - If the results are satisfactory after two years, a different core course(s) will be examined via embedded testing for two years.
 - If the results are unsatisfactory in either course, the course content, delivery of instruction, and student support will be examined. Appropriate changes will be made and embedded testing will continue for another two years for that course(s).
 - This process will continue until learning outcomes have been assessed for all core courses, and then begin again. Assessment of learning outcomes for core courses will be continual.
- Completion of Aviation 2100 with a grade of B- or better is a prerequisite for Aviation 3100, and completion of Aviation 3100 with a grade of B- or better is a prerequisite for Aviation 4500.
 - The percentage of students completing AVN 2100 and AVN 3100 with a grade of B- or better will be monitored. If that percentage drops below 70%, course content, delivery of instruction, and student support for that course(s) will be reviewed.
 - The percentage of students successfully completing AVN 3100 and AVN 4500 will be monitored as well. If that percentage drops below 70%, the prerequisite course(s) will be reviewed to establish that they are providing adequate preparation for AVN 3100 and AVN 4500. Also, course content, delivery of instruction, and student support for AVN 3100 and AVN 4500 will be evaluated.
- Aviation 4500 is the capstone course for the major, bringing together Aviation majors from Business, Engineering, and Arts and Sciences (ASC). Students will be required to complete research or another approved project that, for ASC students, demonstrates breadth of knowledge of air transportation systems and depth of knowledge in a particular issue area.

Indirect Measures:

- An exit survey of graduating seniors, which includes questions about the major regarding students' overall educational experience, classroom experience, research and internship participation, and placement in jobs and graduate schools will be analyzed.
- Focus groups of upper level Social Sciences Air Transportation majors will begin in year 3 and at least once each year after that. The feedback from these sessions will provide additional input in the continual consideration of course content, delivery of instruction, and student support.

4. RELATIONSHIP TO OTHER PROGRAMS; BENCHMARKING

This proposal to revise the SBS Aviation major will strengthen the existing program by providing students with the social scientific skills to analyze the geographic, economic, social, cultural, psychological, and political processes in the aviation industry that help to explain decisions, conflict resolution, and policymaking at the individual, group, and organizational levels in the aviation industry. There are no other programs like this at OSU.

Non-engineering baccalaureate aviation degrees at other universities focus on administration and management. There tend to be two sets of core requirements – non-aviation and aviation cores.

Non-aviation core requirements for aviation baccalaureate programs nationally generally include courses from several disciplines of the social sciences: climatology, physical geography, marketing, economics, communication, psychology (individual and social behavior), and domestic and international law. Appendix C provides examples of the organization and content of other institutions' aviation management/administration programs.

This proposal to revise ASC's aviation major is consistent with what appears to be a convention for these programs, and will prepare students for a variety of careers in aviation that require or prefer baccalaureate degrees⁵. Moreover, this proposal is forward-thinking in that it will provide students the preparation that will be expected as aviation careers are developed or reshaped to deal with increased interest in the global effects of aviation transportation, especially aviation transportation security.

5. STUDENT ENROLLMENT

As of Autumn quarter 2011, there are 175 Aviation majors⁶ in total, and 130 (74%) of those are SBS Aviation majors. The numbers have remained relatively steady over time. As noted above, however, we expect that the new Center for Aviation Studies (CAS) will lead to increased visibility and interest in this major

6. CURRICULAR REQUIREMENTS

The structure of the proposed Social Sciences Air Transportation program is provided in Appendix D. The core courses of the major expose students to the foundational breadth of air transportation systems upon which students' elective courses will build. The core includes an introduction to the industry, the science of physical conditions, aircraft and flight, as well as an introduction to the social, economic, and political considerations that help to explain the regulations and other measures of industry structure.

⁵ See *Careers in Aviation* on the Aircraft Owners and Pilots Association's website, <http://www.aopa.org>, for the careers as pilots, in airline and airport operations, airline and airport services, scientific services (e.g. cartography), law-related services, and office professionals that require or prefer baccalaureate degrees.

⁶ Aviation degrees are conferred by the College of Engineering and the College of Arts and Sciences through its Social and Behavioral Sciences Division. Students interested in the aviation industry may also add an Aviation specialization to the BSBA program in the Fisher College of Business.

Students also choose four courses from each of two sets of electives (eight elective courses in total). From the Social Sciences electives, majors are required to take one course from the *Security* category, the *Individual & Social* category, and the *Institutions* category. A fourth required social sciences elective course can be chosen from among the remaining options in any of the 3 Social Sciences categories.

From the Aviation electives, majors must choose at least 4 courses that provide at least 9 credit hours. Students will be encouraged to work with the advisor in the Center for Aviation Studies (CAS) to choose the set of courses that will best prepare them for their post-graduate plans.⁷

The program also will require successful completion of a capstone course. This course is required of all students majoring in Aviation regardless of the college in which they are enrolled. Students will hear from a variety of industry professionals on a particular topic or issue throughout the course so that they will benefit from these multiple perspectives and those of other students. Through a final course project, students will be able to demonstrate their knowledge of aviation transportation generally as well as about a particular issue specifically.

A complete list of required and elective courses and associated credit hours, prerequisites, and descriptions is provided in Appendix E.

Advising and Student Resources

Students who major in Social Sciences Air Transportation will have both an Aviation advisor and a Geography advisor. Due to the interdisciplinary nature of the major and the variety of post-graduate options available to students, we believe that students will be best served by having both advisors available to them as they shape their programs. Those students pursuing careers in airline and airport operations, services, or flight, for instance, likely will want to emphasize the set of aviation courses they choose. Students pursuing law, scientific services, and transportation logistics, likely will want to emphasize the set of social sciences courses they choose for their programs. Third, students pursuing post-graduation plans in marketing and public relations, research, management, and air traffic control likely will want to work with both advisors closely.⁸

Additionally, students will have access to the Geography Department's Undergraduate Resource Room located in Derby Hall. The Resource Room has computers for students to access e-mail and Carmen and is also equipped with course-relevant software programs, such as Arc/Info for GIS and Cartography courses. Moreover, students will have access to the OSU airport and all its facilities. The Airport offers a unique operational experience for the students with its thriving regional traffic, a dynamic flight school as well as a multitude of Flight simulators. The Aeronautical and Astronautical Laboratories located at the airport offer also outstanding educational opportunities for students with a wide range of interests.

⁷ Students who wish to be eligible for OSU Professional Pilot certification when they graduate will be required to choose an additional 15 hours from among the Aviation electives.

⁸ The foregoing suggests possible scenarios, although we expect that most students will see the benefit of consulting both advisors on a regular basis.

A four-year sample student plan is provided in Appendix F. The average number of credit hours expected for a student at the completion of the major is 129.⁹ The minimum number of credits required for completion of the major is 124 semester hours.

⁹ If as many as 1/3 of majors opt to prepare for flight certification, 1/3 of the majors will have added 15 additional hours from the Aviation Electives component of the program.

APPENDICES

APPENDIX A: Titles of Recent Academic Papers..... 8

APPENDIX B: Existing vs. Proposed Curricula..... 9

APPENDIX C: Baccalaureate Programs at Other Institutions 11

APPENDIX D: Structure of the Social Sciences Air Transportation Major..... 15

APPENDIX E: List of Required and Elective Courses 17

APPENDIX F: Sample 4-Year Plan 22

APPENDIX G: Curricular Map..... 23

APPENDIX H: Concurrences.....26

APPENDIX A

AIR TRANSPORT RESEARCH SOCIETY (ATRS)
TITLES OF RECENT ACADEMIC PAPERS

The Air Transport Research Society (ATRS) was begun in 2001 and, since then, has spawned a variety of peer-reviewed academic journals – *Journal of Air Transport World Wise*; *Journal of Air Transport Management*; *Transportation Research – Elsevier Science Publications*. Titles from recent academic papers provide sound evidence of the importance of social science methods and analyses for understanding the aviation industry and air transportation systems.

- The Southwest Effect: A Time Series Intervention Analysis on Passengers Carried by Market Segment and Share.
 - The Influence of Terrorism on Travelling and Destination Selection.
 - Air Travel Preferences by Population Segment: Results from a United Kingdom Household Survey.
 - Unilateral Emission Trading and Competition between US and EU Carriers.
 - The Environmental Effects of Airline Carbon Emissions Taxation in the U.S.
 - The Importance of Spatial Economics for Assessing Airport Competition.
 - The Impact of Liberalization on Alliances and Mergers: EU-US Open Skies.
 - Advances in Air Traffic Management: The Integration of Predictive Weather into ATM Systems.
 - EU-Legislation Tackling Aviation's CO2 Emissions: Model-Based Empirical Estimation of the Economic and Ecologic Impact of the EU-Emissions Trading Scheme on the International Aviation Sector.
 - Introducing Emission Trading Schemes in the Aviation Industry: Impacts and Reaction Strategies.
 - Proposal for Calculation of Airports Accessibility with Use of Geographical Information Systems.
 - Flying through Stormy Skies: How Airlines Can Navigate the Global Recession.
 - Disruption Management in Airline Operations: How Situation Awareness Informs Controller Decision-Making.
 - Safety Perception of Turkish and European Passengers in Turkish Airports: A Cross-National Comparison.
 - Aviation Security – A Structural Complexity Management Approach.
 - Work Stress, Job Satisfaction, Organizational Commitment and Turnover Intentions for Flight Attendants - Evidence from Taiwan.
 - The Relationship between Psychosocial Risk Factors and Work-Related Musculoskeletal Disorders among Flight Attendants.
 - Aviation Policy in Transition Economies: The Case of China.
 - Airport Monopoly Regulation with Downstream Airline Duopoly and Vertical Product Differentiation.
 - Effects of Airport-Airline Vertical Relationships.
 - An Analysis of Corporate Social Responsibility among Low-Fares Airlines Flying To and From the United Kingdom.
 - There Is No Such Thing as a Fair Price without Fair Pricing - Perceived Price Fairness of Airline Revenue Management.
 - Muted Reactions – Assessing the Impact of the EU/US Open Skies Agreement.
 - Regional Airport Subsidies in the EU – The Case for a More Economic Approach in the Application of the EU's State Aid Rules.
 - Development of Air Freight – Indicators of Influence on World Trade – An Empirical and Analytical Study.
 - Implications for Strategy Formulation by Using Sustainable Growth Model.
 - The Political Economy of a Failing National Carrier.
 - The Economic Benefits and Social Costs of Airport Development.
 - Impacts of Liberalization in the North-East Asian Passenger Market.
 - The Impacts of GATS Annex on Air Transport Services Coverage Expansion.
 - Determination of Statewide Economic Benefits of Civil and Commercial Airports in Arizona.
 - International Trade Rules and Aircraft Manufacturing: Will the World Trade Organization Resolve the Airbus-Boeing Dispute?
 - Estimating Effects of Airport Capital on Economic Growth in Germany.
 - Assessment of Spatial Network Configuration for Cargo Airlines.
 - The Impact of Indian Air Transport Developments on UK-Indian Tourism.
 - Intermodal Competitive Dynamics in European Passenger Transportation.
 - The Impact of Flight Delays on Passenger Demand and Yields in the U.S. Airline Industry.
-

APPENDIX B

EXISTING *SBS AVIATION MAJOR* VS. PROPOSED *SOCIAL SCIENCES AIR TRANSPORTATION MAJOR*

Existing SBS Aviation Major	
Course	Cr Hrs
AVIATION CORE	
All Required = 26 Hours	
AV 300: The National Aviation System	3
AV 310: Private Pilot Fundamentals	5
AV 530: Aviation Regulations	3
AV 540: Aviation Human Factors	3
AV 550: Aviation Management	3
AV 560: Aviation Safety	3
AV 650: Air Transportation Analysis 1	3
Acctg 211: Intro to Acctg OR Acctg 310: Foundations of Accounting	3
AVIATION ELECTIVES	
Choose 6 Hours	
AV 322: Aviation History	3
AV 341: Private Pilot Flight Lab I	2
AV 342: Private Pilot Flight Lab II	2
AV 410: Aviation Weather	3
AV 413: Commercial Pilot Fundamentals	3
AV 415: Instrument Flight Fundamentals	3

Proposed Social Sciences Air Transportation Major			
Course	Cr Hrs	Course	Cr Hrs
CORE			
All Required = 44 Hours			
AVN 2000: Intro to Aviation Industry	3		
AVN 2100: Private Pilot Fundamentals	5		
AVN 2200: Aviation Communication	3		
AVN 2300: Aircraft Performance & Weather	3		
AVN 3000: Aviation Mgmt & Marketing	3		
AVN 3200: Aviation Regulations	3		
AVN 3300: Aviation Human Factors & Safety	3		
Geog 2400: Economic & Social Geog	3		
Geog 3300: Transportation Security	3		
Geog 5900: Climatology	3		
Geog 5200: Elements of Cartography	3		
Geog 5220: Fundamentals of Geographic Info Systems	3		
Geog 5300: Geography of Transportation	3		
AVN 4500 (Capstone Course)	3		
SOCIAL SCIENCE ELECTIVES		AVIATION ELECTIVES	
4 Courses; at least 1 from each of 3 areas = 12 Hours		Minimum of 9 Hours ¹	
Security	3	AVN 2101: Private Pilot Flight Lab*	2
Individual & Social	3	AVN 2102: Private Pilot Flight Lab II*	2
Institutional	3	AVN 2501: Commercial Cross Country Flight Lab*	2
Choice of Area	3	AVN 3100: Instrument Flight Fundamentals*	3
		AVN 3101: Instrument Pilot Flight Lab*	3
		AVN 3193: Individual Stds in Aviation	2-5

AV 591: Flight Network Analysis & Optimization	3
AV 674: Airport Systems Planning, Design, & Development	3
AVIATION MGMT COURSES	
Choose 6 Courses = 18 Hours	
AV 552: Airport Mgmt	3
AV 591: Flight Network Analysis & Optimization	3
AV 652: Int'l Aviation System	3
AV 654: Airline Marketing	3
AV 674: Airport Systems Planning, Design, & Development	3
AV 750: Air Transportation Analysis II	3
Geog 645: Geography of Transportation	3
Econ 201: Principles of Macroecon	3

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AVN 4000: Air Transportation Analysis I	3
AVN 4100: Commercial Flight Operations*	3
AVN 4101: Commercial Pilot Flight Lab*	3
AVN 4193: Individual Stds in Aviation	2-5
AVN 4300: Advanced Multi-Engine Operations*	2
AVN 4301: Comm/Inst Pilot AMEL Flight Lab * OR AVN 5101: Flight Instructor ASEL Flight Lab *	2
AVN 4400: Airport Management*	3
AVN 4800: Professional Practices in the Industry	2
AVN 5000: Air Transportation Analysis II	3
AVN 5100: Flight Instruction Methodology*	2
AVN 5102: Flight Instructor AMEL Flight Lab	1
AVN 5193: Individual Stds in Aviation	2-5
AVN 5194: Group Stds in Aviation	2-5
AVN 5200: Instrument Flight Instruction Methodology	2
AVN 5201: Instrument Flight Instruction Flight Lab	1
AVN 5300: Airport Planning, Design, & Development	3

Aviation Core	26 hrs
Aviation Electives	6 hrs
Aviation Mgmt	18 hrs
Total Major	50 hrs

Core	44 hrs
AVN Electives	9 hrs
Social Science Electives	12 hrs
Total Major	65 hrs

¹ Courses marked with an asterisk (21-24 hours) are required for those students seeking eligibility for OSU professional pilot certification. Note that this will require an additional 15 hours above the minimum hours required for the degree.

**APPENDIX C
BACCALAUREATE PROGRAMS AT OTHER INSTITUTIONS**

BACCALAUREATE INSTITUTION	REQUIRED CORE			SEMESTER HOURS	
	NON-AVIATION CORE	AVIATION CORE	ELECTIVES	GE HOURS	TOTAL DEGREE HOURS
Western Michigan University <i>Aviation Science & Administration</i>	Accounting I & II	Intro to Aviation	Professional Flight I Theory & Lab		123
	Transportation Tech: Policy, Perils & Promise	Aerodynamics & Performance	Aviation Mgmt Intern		
	Interpersonal Communication	Aircraft Systems	Organization Behavior		
	Fluency w/Info Tech	Aviation Safety	Multinat'l Mgmt Entrepreneurship		
	Principles of Micro & Macro	Crew Resource Mgmt	Airline Strategy		
	Organization of Industries	Aviation Meteorology			
	Business Finance	Advanced Aircraft Systems			
	Physical Geography	Aviation Legislation			
	Intro to Meteorology & Climatology	Airport Planning, Ops, & Admin			
	Tech Communication	Corporate Aviation Mgmt			
	Calculus	Airline Administration			
	Marketing Principles	Int'l Aviation			
	Elementary Physics	Senior Project - Planning			
	General Psychology	Senior Project - Analysis			
	Business Statistics				
Business Enterprise					
CUNY -- York College <i>Aviation Management</i>	Accounting I & II	Intro to Aviation Safety & Security	1 Course from Group I	55-66	156
	Intro to Aviation Business	Intro to Aviation Business	Intro to Mgmt Info Systems		
	Business Law	Airport Planning & Mgmt	Air Cargo Mgmt		

**APPENDIX C
BACCALAUREATE PROGRAMS AT OTHER INSTITUTIONS**

BACCALAUREATE INSTITUTION	REQUIRED CORE			SEMESTER HOURS	
	NON-AVIATION CORE	AVIATION CORE	ELECTIVES	GE HOURS	TOTAL DEGREE HOURS
	Business Finance	Aviation Ops	Intro to Emergency Planning & Mgmt		
	Case Studies in Aviation Financial Mgmt	Aviation Policy Seminar	Aviation Internship in the Private Sector		
	Intro to Microeconomics		Weather & Climate		
	Intro to Economic Statistics		1 Course from Group 2		
	Aviation Mktg & Economics		Basic Factors in Int'l Politics		
	Public Administration in the Political Setting		Aviation Law		
			Aviation Internship in the Public Sector		
			1 Course from Group 3		
			Human Factors Psychology		
			Psychology of Terrorism		
			Social Research		
Purdue University <i>Airline Management</i>	Intro to Public Relations	Airline Mgmt		62	128
	Principles of Persuasion	Airport Mgmt			
	Intro to Advertising	Air Traffic Control			
	Problems in Public Relations	Aviation Internship			
	Consumer Relations Mgmt	Airport Operations			
	Consumer Behavior	Airport Manager Certification			
	Industrial Safety				
	Automatic Identification & Data Capture				

**APPENDIX C
BACCALAUREATE PROGRAMS AT OTHER INSTITUTIONS**

BACCALAUREATE INSTITUTION	REQUIRED CORE			SEMESTER HOURS	
	NON-AVIATION CORE	AVIATION CORE	ELECTIVES	GE HOURS	TOTAL DEGREE HOURS
	Leadership Principles				
	Occupational Safety & Health				
	Human Resource Issues				
	Leadership for Organizational Change				
	Leadership through Teams				
	Leadership in a Global Environment				
Purdue University <i>Airport Management</i>	Intro to Public Relations	Airport Mgmt		62	128
	Principles of Persuasion	Airport Manager Certification			
	Intro to Advertising	Airline Mgmt			
	Problems in Public Relations	Air Traffic Control			
	Industrial Safety	Aviation Internship			
	Automatic Identification & Data Capture	Airline Operations			
	Leadership Principles				
	Occupational Safety & Health				
	Human Resource Issues				
	Leadership for Organizational Change				
	Leadership through Teams				
	Leadership in a Global Environment				
	Intro to Environmental Policy				

**APPENDIX C
BACCALAUREATE PROGRAMS AT OTHER INSTITUTIONS**

BACCALAUREATE INSTITUTION	REQUIRED CORE			SEMESTER HOURS	
	NON-AVIATION CORE	AVIATION CORE	ELECTIVES	GE HOURS	TOTAL DEGREE HOURS
South Dakota State University <i>BS in Aviation w/Aviation Mgmt Specialization</i>	Physical Climatology & Meteorology + Lab Course	Intro to General Aviation		65	128
	Thru Calculus 2	Private Pilot Theory			
	Principles of Acctg I & II	Private Pilot Flight I & II			
	Principles of Macroecon	Aviation Safety			
	Principles of Microecon	Aviation Weather			
	Physics + Lab Course	Advanced Flight Principles			
	General Psych	Instrument Pilot Theory			
	Intro to Soc	Instrument Flight			
	Business Finance	Commercial Pilot Theory			
	Intro to Computers	Commercial Flight I & II			
	Technical Communication	Aviation Law			
	Physical Geography + Lab Course	Intro to Aviation Admin			
	Fundamentals of Speech	Human Factors in Aviation			
	Legal Environment of Business				
	Organization & Mgmt				

APPENDIX D

**SOCIAL SCIENCES AIR TRANSPORTATION MAJOR
65 SEMESTER HOURS**

14 CORE COURSES + 4 AVIATION ELECTIVES + 4 SOCIAL SCIENCES ELECTIVES

CORE All Required	SOCIAL SCIENCES ELECTIVES 4 courses; at least 1 from each area	AVIATION ELECTIVES 4 Courses Required; at least 9 hours¹⁰
AVN 2000: Intro to Aviation Industry (3)	Security	AVN 2101: Private Pilot Flight Lab (2)*
AVN 2100: Private Pilot Fundamentals (5)	Comm 3330: Communication & Conflict Mgmt (2)	AVN 2102: Private Pilot Flight Lab II (2)*
AVN 2200: Aviation Communication (3)	Comm 3597.01: Global Issues & Communication: Media & Terrorism (3)	AVN 2501: Commercial Cross Country Flight Lab (2)*
AVN 2300: Aircraft Performance & Weather (3)	IS 3701: Introduction to Homeland Security (3)	AVN 3100: Instrument Flight Fundamentals (3)*
AVN 3000: Aviation Mgmt & Marketing (3)	IS 4700: Terror and Terrorism (3)	AVN 3101: Instrument Pilot Flight Lab (3)*
AVN 3200: Aviation Regulations (3)	Poli Sci 4318: Politics of Int'l Terrorism (3)	AVN 3193: Individual Stds in Aviation (2-5)
AVN 3300: Aviation Human Factors & Safety (3)	Psych 3525: Psychology of Personal Security (3)	AVN 4000: Air Transportation Analysis I (3)
Geog 2400: Economic & Social Geography (3)	SOC 3315: Sociology of Terrorism (3)	AVN 4100: Commercial Flight Operations (3)*
Geog 3300: Transportation Security (3)	Individual & Social	AVN 4101: Commercial Pilot Flight Lab (3)*
Geog 5900: Climatology (3)	Comm 2367: Persuasive Communication (3)	AVN 4193: Individual Stds in Aviation (2-5)
Geog 5200: Elements of Cartography (3)	Comm 2331: Strategic Comm Principles (3)	AVN 4300: Advanced Multi-Engine Operations (2)*
Geog 5220: Fundamentals of Geographic Info Systems (3)	Comm 3331: Communication in Decision Making (3)	AVN 4301: Comm/Inst Pilot AMEL Flight Lab (2)* OR AVN 5101: Flight Instructor ASEL Flight Lab (2)*
Geog 5300: Geography of Transportation (3)	Comm 3545: Principles of Human-Computer Interaction (3)	AVN 4400: Airport Management (3)*
AVN 4500 (Capstone Course) (3)	Geog 3600: Space, Power, & Poli Geography (3)	AVN 4800: Professional Practices in the Industry (2)
	Geog 5700: Geography of Development (3)	AVN 5000: Air Transportation Analysis II (3)
	IS 5195: Selected Topics in Int'l Studies (3)	AVN 5100: Flight Instruction Methodology (2)*
	Poli Sci 2150: Intro to Political Behavior (3)	AVN 5102: Flight Instructor AMEL Flight Lab (1)
	Psych 3309: Human Motor Control & Learning (3)	AVN 5193: Individual Stds in Aviation (2-5)
	Psych 3508: Psychology of Judgment & Decision-Making (3)	AVN 5194: Group Stds in Aviation (2-5)
	Psych 3521: Personnel Psychology (3)	AVN 5200: Instrument Flight Instruction Methodology (2)

¹⁰ Courses marked with an asterisk (21-24 hours) are required for those students seeking eligibility for OSU professional pilot certification. Note that this will require an additional 15 hours above the minimum hours required for the degree.

	Soc 3302: Technology & Global Society (3)	AVN 5201: Instrument Flight Instruction Flight Lab (1)
	Soc 2370: Social Psychology in Sociological Perspective (3)	AVN 5300: Airport Planning, Design, & Development (3)
	Institutions	
	Comm 2540: Intro to Communication Technology (3)	
	Comm 3325: Introduction to Org'l Comm (3)	
	Comm 2668: Intercultural Communication (3)	
	Comm 3443: Global Media (3)	
	Econ 3048: Ethics and Social Responsibility in Economic Life (3)	
	Econ 4600: International Economic Relations (3)	
	Econ 4700: Government and Business (3)	
	Econ 5850: Labor Economics and Industrial Relations (3)	
	Geog 3701: The Making of the Modern World (3)	
	Geog 3702: Life & Death Geog: Global Population Dynamics (3)	
	Geog 5802: Globalization and Environment (3)	
	IS 4800: Cultural Diplomacy (3)	
	IS 5800: International Law (3)	
	Poli Sci 3115: Intro to the Policy Process (3)	
	Poli Sci 4200: Politics of Modern Democracies (3)	
	Soc 2309: Intro to Law & Society (3)	
14 Courses; 44 Hours	4 Courses; 12 Hours	4 Courses; 9 Hours Minimum

	SEMESTER HOURS	# OF COURSES
CORE	44	14
SOCIAL SCIENCE ELECTIVES	12	4
AVIATION ELECTIVES	9	4
TOTAL	65	22

APPENDIX E

**PROPOSED SOCIAL SCIENCES AIR TRANSPORTATION MAJOR REVISION
LIST OF REQUIRED AND ELECTIVE COURSES**

COURSES (credit hours)	PREREQUISITES	COURSE DESCRIPTION
AVN 2000: Intro to Aviation Industry (3)		Introduction to the aviation industry, including its elements, components, and structures. Topics include: aircraft, airports, airspace, a survey of industry segments and purposes, and careers and career paths.
AVN 2100: Private Pilot Fundamentals (5)		Study of flight fundamentals, aircraft operations, weather, and regulations required for Private Pilot certification. This course is conducted under Federal Aviation Administration Regulations Part 141.
AVN 2101: Private Pilot Flight Lab (2)	AV 2100 with a B- or better. An application and orientation process is required before enrollment.	The first course in a series of two courses that culminate in the attainment of a private pilot certificate with airplane single engine land privileges.
AVN 2102: Private Pilot Flight Lab II (2)	AV 2101.	The second course in a series of two courses that culminate in the attainment of a private pilot certificate with airplane single engine land privileges.
AVN 2200: Aviation Communication (3)	AV 2000 & AV 2100.	Consideration of oral, written, operational, professional, impromptu, prepared, and management communication. Emphasis on aviation communication protocols and formats.
AVN 2300: Aircraft Performance & Weather (3)	AV 2000 & AV 2100.	Weather theory, patterns, data, and analysis. Data formats and sources. Consideration of weather conditions as they relate to aircraft and flight performance.
AVN 2501: Commercial Cross Country Flight Lab (2)	Aviation 2100, 2101, 2102, and instructor permission.	Commercial maneuvers cross country flying, instrument flying, introduction to complex aircraft leading to complex endorsement.
AVN 3000: Aviation Mgmt & Marketing (3)	Prerequisites: Aviation 2000, 2100; Co-requisite: Aviation 2200.	Consideration of management and marketing concepts and models. Analysis of management and marketing strategies and practices in the aviation industry.
AVN 3100: Instrument Flight Fundamentals (3)	Aviation 2100 with a B- or better.	Study of flight by reference to instruments, IFR regulations, and procedures in the National Airspace System.
AVN 3101: Instrument Pilot Flight Lab (3)	Prerequisites: Aviation 2100 and 2102 Co-requisite: Aviation 3100.	Instrument flight operations, navigation, patterns, maneuvers, regulations, approach protocols, and cross country flight planning and execution.
AVN 3193: Individual Stds in Aviation (2-5)	Instructor approval.	Research, project(s), and/or investigation into aviation topics that are not treated in existing classes.
AVN 3200: Aviation Regulations (3)	Aviation 3000 pre- or co-requisite.	Consideration and analysis of aviation regulatory environments and processes, such as regulatory certifications, rulemaking, and legislation. Maintenance, airports, aircraft, and operations. Law, environment, safety, security, and operations.
AVN 3300: Aviation Human Factors & Safety (3)	Aviation 3000 pre- or co-requisite.	Consideration of human factors including all sensory, perceptive, cognitive and decision making dynamics as they are expressed in aviation. Consideration of aviation safety including incidents, accidents, crew resource management, and performance.
AVN 4000: Air Transportation Analysis I (3)	Aviation 3000.	Analysis of domestic and international air transportation systems and models. Particular focus on supply and demand components. Consideration of major industry segments, such as commercial, business, cargo, and general aviation.

COURSES (credit hours)	PREREQUISITES	COURSE DESCRIPTION
AVN 4100: Commercial Flight Operations (3)	Aviation 2100 with a B- (80%) or better and Aviation 2102 or instructor permission.	Study of regulations, aerodynamics, systems, performance profiles, navigation, weather, and operations for the commercial pilot certificate.
AVN 4101: Commercial Pilot Flight Lab (3)	Aviation 2102 and 3101.	Second course toward Commercial Pilot certificate single engine land.
AVN 4193: Individual Stds in Aviation (2-5)	Instructor approval.	Research, project(s), and/or investigation into aviation topics that are not treated in existing classes.
AVN 4300: Advanced Multi-Engine Operations (2)	Aviation 2100.	Introduction and consideration of Part 121 and 135 operations with a comprehensive study of the principles of advanced aircraft operations.
AVN 4301: Comm/Inst Pilot AMEL Flight Lab (2) OR AVN 5101: Flight Instructor ASEL Flight Lab (2)	4301: Aviation 4100 and 3100 with a B- or better AND Aviation 3101 and 2501. 5101: Aviation 5100 with a B- or better.	Aviation 4301 is designed to obtain the aeronautical knowledge and flight training required to attain an airplane multi-engine rating in addition to the Commercial Pilot certificate. Obtain the necessary aeronautical knowledge, experience and skills to meet or exceed FAR Part 61 requirements for a flight instructor certificate with airplane single engine land privileges.
AVN 4400: Airport Management (3)	Aviation 3000.	Comprehensive study of airport operations and management; role of the airport manager in planning, finance, administration, public relations, socio-political and environmental considerations, and operational requirements and maintenance.
AVN 4500 (capstone): Aviation Transportation	Senior standing as Aviation major.	The course is designed to apply the fundamental knowledge gained through studies towards addressing a current issue of interest to the aviation sector. These issues are typically presented to students in the class directly from industry, such as commercial air carriers, business aviation providers, airports, or local, regional, or federal government agencies. Students majoring in aviation through each of the program's offerings in Arts and Sciences, Engineering and Business are enrolled together in this course, which allows for the students to address an aviation issue from a variety of perspectives.
AVN 4800: Professional Practices in the Industry (2)	Faculty sponsor and industry employer/sponsor approval.	Application of academic skills, knowledge, and training to identify issues, problems, or research in the student's aviation industry workplace. With employment and faculty sponsorship, problem identification, analysis, and solution proposals.
AVN 5000: Air Transportation Analysis II (3)	Aviation 4000.	Consideration of commercial air transportation systems with emphasis on performance measurement, productivity, optimization, and network analysis.
AVN 5100: Flight Instruction Methodology (2)	Aviation 2300, 3100, and 4100 with a B- or better.	Study of learning theories, communication techniques, the teaching process, teaching methods, and evaluation. Application of these concepts to develop lesson plans and course(s) of study.
AVN 5102: Flight Instructor AMEL Flight Lab (1)	Aviation 5101 and Aviation 4301.	Combines the aeronautical knowledge and flight training to attain an airplane multi-engine rating in addition to the Flight Instructor ASEL certificate.
AVN 5193: Individual Stds in Aviation (2-5)	Instructor approval.	Research, projects, and/or investigations into aviation topics that are not treated in existing classes.
AVN 5194: Group Stds in Aviation (2-5)	Instructor approval.	Team research, projects, and/or investigation into comprehensive and larger aviation topics that are not treated in existing classes.
AVN 5200: Instrument Flight Instruction Methodology (2)	Aviation 3100 and Aviation 5100 with a B- or better.	Teaching methods and evaluation procedures for a course of study leading to an Instrument Instructor rating.
AVN 5201: Instrument Flight Instruction Flight Lab (1)	Aviation 5101 or Flight Instructor Certificate.	Obtain the necessary aeronautical knowledge, experience, and skills to meet or exceed FAR Part 61 requirements for instrument flight certification.
AVN 5300: Airport Planning, Design, & Development (3)	Aviation 3000.	A comprehensive study of airport planning, design and development, the role of the airport and its components as part of the overall air

COURSES (credit hours)	PREREQUISITES	COURSE DESCRIPTION
		transportation system, the issues related to the planning, design, and development of the airport and its system
Comm 2331: Strategic Comm Principles (3)		The role of strategic communications in business, including basic principles of integrated marketing, theory, and ethical standards.
Comm 2367: Persuasive Communication (3)	English 1100.XXX, or equiv, AND sophomore standing or above.	Principles of persuasion as reasoned discourse.
Comm 2540: Intro to Communication Technology (3)		Processes of communication technology, critical consumption, ethical issues, current problems of the markets, technologies and policies of online communication, the world wide web, and media.
Comm 2668: Intercultural Communication (3)		An examination of the role of intercultural communication in organizational contexts and the attendant effects on the creation and transmission of cultural consciousness, knowledge, tradition, and practices.
Comm 3325: Introduction to Org'l Comm (3)		Communication plays a vital role in the success and failure of organizations. Addresses prior and current approaches to the study of organizational communication.
Comm 3330: Communication & Conflict Mgmt (2)		An overview of the communication and conflict literature with emphasis on effective conflict management.
Comm 3331: Communication in Decision Making (3)		Decision-making as a process; comparisons between interpersonal, bargaining-negotiation contexts, and groups and organizations; descriptive and prescriptive models of decision-making in small groups and organizations.
Comm 3443: Global Media (3)		Examination of int'l news communication systems and selected media concepts and the role they play in political, economic, and cultural environments.
Comm 3545: Principles of Human-Computer Interaction (3)	Comm 240.	Introduces students to principles of HCI that are drawn from social, psychological and behavioral research and the helps designers create user-centered, interactive technologies.
Comm 3597.01: Global Issues & Communication: Media & Terrorism (3)	Junior or Senior standing.	Focuses on the portrayal of terrorism in the media and on how terrorists use the media to influence public opinion.
Econ 3048: Ethics and Social Responsibility in Economic Life (3)	At least one of these courses is recommended: Econ 1100.01 or 1100.02 or 1100.03 or 2001 or 2002.	Examines the role of ethical norms and social constraints in determining economic outcomes.
Econ 4600: International Economic Relations (3)	Econ (2001 AND 2002) OR 4001.	Survey of international economic relations; the basis of world trade; commercial and financial policy, particularly of the United States; and recent international economic organization.
Econ 4700: Government and Business (3)	Econ 2001.	Economic and legal aspects of government regulation of business in the United States; philosophies and concepts of public control; contemporary problems.
Econ 5850: Labor Economics and Industrial Relations (3)	Econ 2001.	Survey of the field of labor economics; trade unionism, collective bargaining; wage determination, employment, unemployment; labor legislation.
Geog 2400: Economic & Social Geography (3)		Geographic analysis of relationships between society and economy; focusing on such issues as globalization, production and consumption, inequality and social difference.
Geog 3300: Transportation Security (3)		Geographic aspects of transportation security. Spatial analysis of transportation linkages. Relationships between transportation and spatial organization; selected analytical models dealing with threats to transportation security.
Geog 3600: Space, Power, & Poli Geography (3)		Political geographic thought; territory and territoriality; borders and scale; space, power and uneven development; states and statecraft; and the politics of nations, regions and localities.

COURSES (credit hours)	PREREQUISITES	COURSE DESCRIPTION
Geog 3701: The Making of the Modern World (3)	Sophomore standing or above.	The geographies of modernity and their formation: the world market, the global polity, diasporas and constructing difference, colonialism, the transformation of nature, Eurocentricity, post-modernity.
Geog 3702: Life & Death Geog: Global Population Dynamics (3)		Theories of population change; global and national contexts of fertility policy and reproductive health, morbidity and mortality trends; migration; environmental effects of population growth; urbanization.
Geog 5900: Climatology (3)		The elements and the controls of climate; types of climate and their distribution; climates and their effects on the economic and other activities of humans.
Geog 5200: Elements of Cartography (3)		A study of the cartographic techniques of map compilation and presentation including generalization, symbolization, reproduction, and simple computer mapping with an emphasis on thematic mapping.
Geog 5220: Fundamentals of Geographic Info Systems (3)	Geography major or permission of instructor.	Basic principles of geographic and land information systems and their use in spatial analysis and information management.
Geog 5300: Geography of Transportation (3)		Relation between transportation and spatial organization; selected analytical models dealing with traffic demand, network configuration, and allocation of transport facilities; application to selected problems.
Geog 5700: Geography of Development (3)		Political economy of development; development theory; the historical geography of capitalist development; and contemporary development practices and strategies.
Geog 5802: Globalization and Environment (3)		Transnational dimensions of changes to the natural environment; ways that global economic activity, international institutions, and global environmentalism contribute to environmental problems and solutions.
IS 3701: Introduction to Homeland Security (3)	Rank 2 or higher or permission of instructor.	Comprehensive overview of U.S. homeland security. Threats from natural disasters, terrorism, etc will be studied. Programs and technologies involved in disaster prevention and response.
IS 4700: Terror and Terrorism (3)		Focus on the origins, evolution and place of terrorism in the modern world and the ideology, motivation, and methods of a number of terrorist groups.
IS 4800: Cultural Diplomacy (3)	Rank 2 or higher or permission of instructor.	Cultural Diplomacy is the exchange of information, ideas, and values among nations and peoples. Public and private mechanisms for these exchanges are explored.
IS 5195: Selected Topics in Int'l Studies (3)	Open only to Int'l Stds majors or students with equivalent preparation.	Class discussions, with several guest speakers, informal conferences, and a reading and research program arranged to meet the special needs of those enrolled.
IS 5800: International Law (3)	Rank 2 or higher or permission of instructor.	Examination of the varied sources, traditions, functions and structures of international law and its significance in maintaining stability, continuity and communication in the international system.
Poli Sci 2150: Voters and Elections (3)		Focus on concepts such as attitude, role, and group and their application in such areas as voting behavior and political participation. 201H (honors) may be available.
Poli Sci 3115: Intro to the Policy Process (3)		Introduction to the workings of policy-making processes within governments, and the use of social science reasoning to evaluate and improve the content of policies.
Poli Sci 4318: Politics of Int'l Terrorism (3)		Examines international terrorism's concepts and actors, the motivations and causes of terrorism, the experience of the United States, and tensions between freedoms and security.
Poli Sci 4200: Politics of Modern Democracies (3)		A survey of the basic institutions and politics of modern democracies, with emphasis on representativeness and democratic stability.

COURSES (credit hours)	PREREQUISITES	COURSE DESCRIPTION
Psych 3508: Psychology of Judgment & Decision-Making (3)	Psych 2220 or 3321, or Stats 1450 or 2450.	An overview of current models and empirical research on cognitive processes in human decision-making and judgment under risk or uncertainty.
Psych 3521: Personnel Psychology (3)	Psych 1100 AND (Psych 2220 or 3321, or Stats 1450 or 2450).	Overview of theory, method, and practices of personnel psychology: job analysis, recruiting, personnel selection, performance appraisal, and training.
Psych 3525: Psychology of Personal Security (3)	Psych 1100.	Surveys the diverse psychological literature on personal security, a key ingredient in psychological well-being.
Soc 2309: Intro to Law & Society (3)		Introduction to the law as a social institution, including the origins of law and its relationship to other social institutions, social control, and social change.
Soc 2370: Social Psychology in Sociological Perspective (3)		Analysis of relationships between social structure and personality; language; its consequences for social behavior; socialization: learning of motives and social roles; personality: development, organization, and disorganization.
Soc 3302: Technology & Global Society (3)		Social aspects of technology, social change, and technological development; underdevelopment and the global economy.
Soc 3315: Sociology of Terrorism (3)		Provides a broad review of the definitions, histories, types, and theories of terrorism from a sociological perspective.

APPENDIX F

SAMPLE 4-YEAR PLAN: SOCIAL SCIENCES AIR TRANSPORTATION						
	Autumn Semester	Cr Hrs	Spring Semester	Cr Hrs		
YEAR 1	GE 1 st Writing	3	Aviation elective	3		
	Aviation 2100 (core)	5	GE 2nd Foreign Language	4		
	College Survey Course	1	GE Social Science (Security Elective)	3		
	GE Math	3-5	Aviation 2000 (core)	3		
	GE 1 st Foreign Language	4	GE Social Science (Geog 2400–required)	3		
	Semester Total Hours	16-18	Semester Total Hours	16	1st Year	32--34
YEAR 2	GE 3rd Foreign Language	4	Aviation elective	3		
	GE 2nd Writing	3	Geography 3300 (core)	3		
	Geography 5900 (core)	3	Aviation 2300 (core)	3		
	Aviation 2200 (core)	3	Aviation 3000 (core)	3		
	GE 1 st Science	3	GE 2 nd Science	4		
	Semester Total Hours	16	Semester Total Hours	16	2nd Year	32
YEAR 3	Geography 5300 (core)	3	Aviation Elective	3		
	Aviation Elective	3	GE Culture & Ideas or Historical Study	3		
	Geography 5200 (core)	3	Geography 5220 (core)	3		
	Aviation Elective	3	Aviation 3300	3		
	GE 3 rd Science	3	GE 1 st Open Option (Individ/Soc Elective)	3		
	Semester Total Hours	15	Semester Total Hours	15	3rd Year	30
YEAR 4	GE Arts	3	Soc Sci 4 th Elective	3		
	Aviation Elective	3	GE Data Analysis	3		
	GE Literature	3	Aviation Capstone	3		
	Aviation Elective	3	Aviation Elective	3		
	GE 2 nd Open Option (Institutions Elective)	3	GE Historical Study	3		
	Semester Total Hours	15	Semester Total Hours	15	4th Year	30
				TOTAL HOURS	124 --	126

APPENDIX G

CURRICULUM MAP

LEARNING GOALS

1. 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.
2. Students acquire and apply statistical skills to critically evaluate data and research findings in the literature (e.g. geospatial data analyses).
3. 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.
4. Students comprehend and critically assess the social, political, economic, and/or physical structures of air transportation systems to explain individual and organizational behaviors.
5. Students know aviation regulations and policies and are able to anticipate their ramifications under different scenarios.
6. Students comprehend the structure of industry and communications flows and are able to pinpoint sources of and remedies for administrative disagreements.
7. 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.

KEY TO LEARNING GOAL LEVELS

- F = Foundational
- I = Intermediate
- A = Advanced

CORE: All Required								
Course Number: Course Title	Cr Hrs	Learning Goals						
		1	2	3	4	5	6	7
AVN 2000: Intro to Aviation Industry	3	F		F	F	F		F
AVN 2100: Private Pilot Fundamentals	5	F						F
AVN 2200: Aviation Communication	3	F			F		F	F
AVN 2300: Aircraft Performance & Weather	3	I	I					I
AVN 3000: Aviation Mgmt & Marketing	3							
AVN 3200: Aviation Regulations	3	I			I	I	I	
AVN 3300: Aviation Human Factors & Safety	3	I	I					I
Geog 2400: Economic & Social Geography	3		F		F			
Geog 3300: Transportation Security	3	I		I	I	I	I	
Geog 5900: Climatology	3		A					
Geog 5200: Elements of Cartography	3		A					
Geog 5220: Fundamentals of Geographic Info Systems	3		A					
Geog 5300: Geography of Transportation	3	A		A	A	A	A	
AVN 4500 (Capstone Course)	3	A	A	A	A	A	A	A

AVIATION ELECTIVES								
Course Number: Course Title	Cr Hrs	Learning Goals						
		1	2	3	4	5	6	7
AVN 2101: Private Pilot Flight Lab (2)	2	F						F
AVN 2102: Private Pilot Flight Lab II (2)	2	F						F
AVN 2501: Commercial Cross Country Flight Lab (2)	2	F						F
AVN 3100: Instrument Flight Fundamentals (3)	3	I						I
AVN 3101: Instrument Pilot Flight Lab (3)	3	I						I
AVN 3193: Individual Stds in Aviation (2-5)	2-5	I	I	I	I	I	I	I
AVN 4000: Air Transportation Analysis I (3)	3	I	I	I	I	I	I	I
AVN 4100: Commercial Flight Operations (3)	3	A						A
AVN 4101: Commercial Pilot Flight Lab (3)	3	A						A
AVN 4193: Individual Stds in Aviation (2-5)	2-5	I	I	I	I	I	I	I
AVN 4300: Advanced Multi-Engine Operations (2)	2	A						A
AVN 4301: Comm/Inst Pilot AMEL Flight Lab (2)	2	A						A
OR								
AVN 5101: Flight Instructor ASEL Flight Lab (2)								
AVN 4400: Airport Management (3)	3	I	I	I	I	I	I	I
AVN 4800: Professional Practices in the Industry (2)	2	I						
AVN 5000: Air Transportation Analysis II (3)	3	A	A	A	A	A	A	A
AVN 5100: Flight Instruction Methodology (2)	2	A						A
AVN 5102: Flight Instructor AMEL Flight Lab (1)	1	A						A
AVN 5193: Individual Stds in Aviation (2-5)	2-5							
AVN 5194: Group Stds in Aviation (2-5)	2-5							
AVN 5200: Instrument Flight Instruction Methodology (2)	2	A						A
AVN 5201: Instrument Flight Instruction Flight Lab (1)	1	A						A
AVN 5300: Airport Planning, Design, & Development (3)	3	A	A	A	A	A	A	I

SOCIAL SCIENCE ELECTIVES								
Course Number: Course Title	Cr Hrs	Learning Goals						
		1	2	3	4	5	6	7
Comm 2331: Strategic Comm Principles	3				F			F
Comm 2367: Persuasive Communication	3							F
Comm 2540: Intro to Communication Technology	3							F
Comm 2668: Intercultural Communication	3				F			
Comm 3325: Introduction to Org'l Comm	3				I			I
Comm 3330: Communication & Conflict Mgmt	2				I			I

Comm 3331: Communication in Decision Making	3					I	I		
Comm 3443: Global Media	3					I			
Comm 3545: Principles of Human-Computer Interaction	3					I			
Comm 3597.01: Global Issues & Communication: Media & Terrorism	3					I			
Econ 3048: Ethics and Social Responsibility in Economic Life	3					I		I	
Econ 4600: International Economic Relations	3					A			
Econ 4700: Government and Business	3					I			
Econ 5850: Labor Economics and Industrial Relations	3					A		A	
Geog 3600: Space, Power, & Poli Geography	3					I	I	I	
Geog 3701: The Making of the Modern World	3					I			
Geog 3702: Life & Death Geog: Global Population Dynamics	3					I			
Geog 5700: Geography of Development	3					A			
Geog 5802: Globalization and Environment	3					A			
IS 3701: Introduction to Homeland Security	3					I		I	
IS 4700: Terror and Terrorism	3					I		I	
IS 4800: Cultural Diplomacy	3					I			
IS 5195: Selected Topics in Int'l Studies	3					A			
IS 5800: International Law	3					A	A	A	
Poli Sci 2150: Voters and Elections	3					F			
Poli Sci 3115: Intro to the Policy Process	3					I		I	
Poli Sci 4318: Politics of Int'l Terrorism	3					I		I	
Poli Sci 4200: Politics of Modern Democracies	3					I			
Psych 3508: Psychology of Judgment & Decision-Making	3					I			
Psych 3521: Personnel Psychology	3					I		I	
Psych 3525: Psychology of Personal Security	3					I			
Soc 2309: Intro to Law & Society	3					F	F		
Soc 2370: Social Psychology in Sociological Perspective	3					F			
Soc 3302: Technology & Global Society	3							I	
Soc 3315: Sociology of Terrorism	3					I			

APPENDIX H

CONCURRENCES

From: David Tomasko [mailto:David_Tomasko@engadmin.ohio-state.edu]
Sent: Monday, January 02, 2012 7:29 PM
To: Haddad, Deborah
Cc: Ed McCaul
Subject: RE: Request for Concurrence

Deborah,

The proposal looks good and I think it is quite distinct from the engineering version of the degree. We concur with approval of the proposal. Let me know if you need anything more formal than this message.
David

David L. Tomasko
Associate Dean for Undergraduate Education and Student Services
Professor, Chemical and Biomolecular Engineering
The Ohio State University
614-247-6548

From: Haddad, Deborah [mailto:haddad.2@osu.edu]
Sent: Saturday, December 31, 2011 4:29 PM
To: David Tomasko
Subject: Request for Concurrence

Hello, Dave,

I hope you have enjoyed the always too-short break and found time to be with your family!

The attachment is a proposal to revise the SBS Aviation major. I don't see duplication with the Engineering College's aviation major, but would appreciate it if you would look it over. If you are satisfied that a student following this revised program has a different profile than an Engineering College student pursuing an aviation degree, please let me know that you concur with the approval of the proposal.

Best regards,
Deborah

Deborah Haddad, PhD
Assistant Dean for Undergraduate Affairs
Social and Behavioral Sciences
College of Arts and Sciences
The Ohio State University
Office: 614.292.4435
FAX: 614.247.7498
Haddad.2@osu.edu

From: Seth Young [mailto:young1460osu.edu@yahoo.com]
Sent: Monday, January 02, 2012 9:48 PM
To: Haddad, Deborah; Seth Young
Cc: Benzakein.2@osu.edu
Subject: Re: Concurrence Request

Hi Deborah,

I hope you enjoyed your break, as well. Too short for me!

I've reviewed the revised proposal. I'd be happy to write a letter of concurrence. To whom should I address the letter?

Thank you very much for working with Mike on this effort. I'm looking forward to promoting the program.

Regards and best wishes for a happy new year.

Seth

Seth Young, PhD, CM, CFI
Director, Center for Aviation Studies
Associate Professor and Interim Chair, Dept. of Aviation
College of Engineering
The Ohio State University
1971 Neil Avenue, Suite 508D
Columbus, OH 43210
tel. 614-292-4556
e-mail: young.1460@osu.edu

From: "Haddad, Deborah" <haddad.2@osu.edu>
To: Seth Young <young.1460@osu.edu>
Cc: "Benzakein.2@osu.edu" <benzakein.2@osu.edu>
Sent: Saturday, December 31, 2011 4:40 PM
Subject: Concurrence Request

Hello, Seth,

I hope you have enjoyed the always too-short break! Very productive time for me....

The attachment is the proposal to revise the SBS Aviation major. As you know, I have worked closely with Mike every step of the way on this. Since he conferred with you regularly, I am writing to ask you for a note that you concur with approval of the program.

Best regards,
Deborah

Deborah Haddad, PhD
Assistant Dean for Undergraduate Affairs
Social and Behavioral Sciences
College of Arts and Sciences
The Ohio State University
Office: 614.292.4435
FAX: 614.247.7498
Haddad.2@osu.edu

From: Unnava, Rao [mailto:unnava_1@fisher.osu.edu]
Sent: Monday, February 13, 2012 6:01 PM
To: Haddad, Deborah
Cc: Mangum, Stephen
Subject: RE: Request for Concurrence

Dear Deborah,

I am pleased to inform you that Fisher College of Business is in concurrence with the changes being proposed in the document you sent us as an attachment with the e-mail below. Please let me know if you need anything else from us. Thanks.

Rao Unnava
Associate Dean of Undergraduate Programs
Fisher College of Business