

**SYLLABUS**  
**SAN JOSE STATE UNIVERSITY**  
**DEPARTMENT OF AVIATION & TECHNOLOGY**

**Aviation 176 – Airline Operations and Management**

**Spring Semester, 2018**  
**Monday & Wednesday, 1330-1445**

**Instructor:** Wenbin Wei, Ph.D.  
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**Classroom:** Industrial Studies 216  
**Office Hours:** Wednesday 1450-1650

THE INSTRUCTOR RESERVES THE RIGHT TO AMEND THIS SYLLABUS  
AS APPROPRIATE WITH COURSE PROGRESSION

**Course Catalog Description**

Aspects of managing air transportation companies. Integration of technical, environmental, market and regulatory considerations in the decision-making process in airline management. Future planning techniques.

**Course Objectives**

This course presents an overall introduction to the field of airline operations and management. The course will cover such topics as airline industry and history, airline finance and economics, airline organization, airline business and low-cost carriers' strategy, management structure, pricing strategy, revenue management technology, financial analysis, demand forecasting models, aircraft fleet selection, marketing strategy, sales and distribution, capacity planning, routing network, cost analysis, business alliance, international business, labor relationship, cargo business, safety and security measure, public relations, aviation law, government regulations, daily operations, emerging and future development.

**Course Learning Outcomes (CLO)**

At the end of this class, students will be able to:

- (1) obtain the basic knowledge of airline operations and management;
- (2) understand both the technical side and business side of airline industry;
- (3) develop skills for majority of tasks in airline management.

**Prerequisite:**

Avia 78

**Required Textbooks**

1. *Air Transportation: A Management Perspective*, by Alexander T. Wells and John G. Wensveen, fifth edition, 2003.

**Recommended Reference Book:**

1. *Airline Management: strategies for the 21<sup>st</sup> century*, by Paul Stephen Dempsey and Laurence E. Gesell, second edition, Coast Aire Publications, 2006.
2. *An Introduction to Airline Economics*, by William E. O'Connor, sixth edition, Greenwood Publishing Group, Inc. 2001.

**Class Format**

- a. Instructor's lectures and presentations
- b. Discussions on current/emerging issues in airline business
- c. Group work and student presentations

**Class Grading**

Class Participation (answer/ask questions in class and correctly answer questions) 10%

Homework 10%

Midterm 25%

Final 30%

Project and presentation 25%

The typical final grade distribution is: 93-100 A; 90-92 A-; 88-89 B+; 83-87 B; 80-82 B-; 78-79 C+; 73-77 C; 70-72 C-; 69 D+; 65-68 D; below 65 F. And the final grade might be adjusted due to the degree of difficulty of the exams and other assignments.

**Course Requirements and Assignment**

Students are required to complete the advance reading assignment for each lecture. The lecture will be difficult for those who don't make this preparation. Homework is due on the day of class, before class starts. No late homework will be accepted unless prior approval is granted. Students are required to use Microsoft Word or any other document editor software to write homework.

**Exams**

Exams will cover materials in lectures, homework, class discussions and required readings. Make-up tests will not be allowed unless prior approval is obtained from the instructor and will be given in the case of evidenced extreme circumstances.

**University's Credit Hour Requirement**

Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally 3 hours per unit per week with 1 of the hours used for lecture) for instruction or preparation/studying or course related activities including but not limited to internships, labs, clinical practice. Other course structures will have equivalent workload expectations as described in the syllabus.

**Term Project and Presentation**

Each group for this project should consist of about 3 students. Each group is required to submit a one-page proposal for the selection of topic for the group project at the beginning of the eighth class of the semester. The proposal should list the names of

the group members and describe briefly the topic, the plan, the schedule and steps of completion for the term project.

Students are encouraged to discuss with the instructor on the topic, resources and writing for the group project. Two options for this term project are: 1) a case study of a specific airline or airline group; and 2) article analysis of a specific topic in airlines' operations and management.

For the first option of this project: case studies for a specific airline, the study should analyze the operations and management of this airline in all aspects that are covered in the class such as: history, current status in the industry, general business strategy, management structure and organization, pricing strategy, revenue management technology, financial situations, aircraft fleet, marketing strategy, sales and distribution, capacity planning, routing network, business alliance, domestic and international business, labor relationship, cargo business, safety and security measure, public relations, emerging and future development, and any other unique business, operations and management feature of this airline.

For the second option of this project: article analysis, the analysis should focus on one specific topic covered in the class such as airlines' current financial issues, pricing strategy, industry alliance, aircraft fleet, labor relations, cargo business, competition with other transportation modes, and etc. Articles can be found in research journals in library, on Internet or in other unpublished reports. The minimum number of papers to be reviewed is five times the number of students in the group; and the maximum number of papers to be reviewed is ten times the number of students in the group.

The final report of the group project should be less than 20 pages. All the reviewed/referred articles should be attached to the paper. The final report is due on the last day of instruction for this semester. The grading on the term project is based on the following criteria:

- a. Use of resources: all the papers reviewed, based on thorough search of information, should be focused on the selected topic and "closely" related with each other.
- b. Organization and style of writing: the final report should include introduction, summarization and analysis of literature, and a conclusion summarizing your own points. It should have clear transitions.
- c. Contents and analysis: focused and relevant discussion of subject, in-depth analysis of literature, and clear summarization of main points.
- d. 15-20 minutes presentation: presentation effectiveness, and clear answers to the questions on the presentation.

### **Classroom Protocol**

Class participation and attendance are strongly encouraged. No cell phones are allowed to use during class.

### **University Policies**

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' Syllabus Information web page at <http://www.sjsu.edu/gup/syllabusinfo/>

### Class Schedule (subject to change with fair notice)

Class	Date	Topic	Reading	Reminder
1	Jan 24	Course Introduction	Syllabus	
2	Jan 29	Airline, aircraft and airport		
3	Jan 31	Airline industry overview	Chapter 5	
4	Feb 5	Airline organization and daily operations	Chapter 7	
5	Feb 7	Airline economics, competition and system analysis	Chapter 6	
6	Feb 12	Airline economics, competition and system analysis	Chapter 6	
7	Feb 14	Airline finance	Chapter 15	
8	Feb 19	Low-cost carrier business strategies: case study		Project proposal due
9	Feb 21	Airline demand: marketing research	Chapter 9	
10	Feb 26	Airline demand: pricing and revenue management	Chapter 10	HW 1 Due
11	Feb 28	Airline demand: pricing and revenue management	Chapter 10	
12	Mar 5	Airline demand: forecasting models and techniques	Chapter 8	
13	Mar 7	Airline demand: forecasting models and techniques	Chapter 8	
14	Mar 12	Airline demand: sales and distribution	Chapter 9	HW 2 Due
15	Mar 14	Airline supply: fleet planning, capacity planning and routing network structure; Exam review	Chapter 12 & 13	
16	Mar 19	Airline supply: fleet planning, capacity planning and routing network structure	Chapter 12 & 13	
17	Mar 21	Middle-term exam		Mid-exam
	Mar 26	Spring break, no class		
	Mar 28	Spring break, no class		
18	Apr 2	Airline supply: fleet planning, capacity planning and routing network structure	Chapter 12	HW 3 Due
19	Apr 4	Airline supply: scheduling, fleet assignment, and personnel assignment	Chapter 12	
20	Apr 9	Airline supply: scheduling, fleet assignment, and personnel assignment	Chapter 12	
21	Apr 11	Airline supply: cost analysis	Chapter 10	
22	Apr 16	Airline supply: cost analysis	Chapter 10	
23	Apr 18	International aviation and aviation law	Chapter 16	HW 4 Due
24	Apr 23	Air Cargo	Chapter 11	
25	Apr 25	Labor relations and human resource management	Chapter 14	
26	Apr 30	Current issues in industry; Course summary; exam review		
27	May 2	Student presentations		
28	May 7	Student presentations		
29	May 9	Student presentations		
30	May 14	Student presentations		Project due

Final Exam: Tuesday, May 22, 2018, 1215-1430, IS 216.