

Department of Civil & Environmental Engineering
Fall 2010
CE 153 Transportation Facility Design

AIRPORT DESIGN

Lecture: TuTh 11am-12(noon), 544 Davis

Laboratory: Tu 2-5pm, 345 Davis Hall

Instructor:

Dr. Jasenka Rakas

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GSI:

Aurelien Vidal

Office Hours: TBD

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Course Textbook:

De Neufville, R. and A. Odoni: *Airport Systems - Planning, Design, and Management*, McGraw-Hill, 2003 ISBN 0-07-138477-4

Course Websites:

<https://bSpace.Berkeley.edu>

<http://www.ce.berkeley.edu/~rakas/ce153.html>

Requirements:

1. Five homeworks
2. one midterm exam
3. one final exam
4. Final term project report

Course Description:

This is a design course focused on airports. The course includes an introduction to aviation systems and to airport planning. The coverage includes the operating characteristics of airplanes as they relate to airport operations and design; the planning and design of the airfield; passenger and cargo terminal systems; airport land use and layout planning; access facilities; air traffic control; environmental impact analysis; and airport economics and finance. Coverage will include geometric design as well as air traffic operations and management.

The course includes a design project where the students work in teams on a current airport planning and design. The project typically involves the planning and design of an airport expansion program for a major air carrier airport. The class will be organized in working teams each focusing on one component of the project. The course includes lectures, laboratory exercises, homework assignments, a design project report, a midterm, and a final examination. Students will be asked to present the result of the design project in front of a jury of visiting airport planning professionals. We will try to organize a field trip to one of the local area airports.