

Air Transportation Systems Infrastructure

Course Schedule: May 24-30, 2015

Profs. Hamsa Balakrishnan, R. John Hansman and Amedeo Odoni

Monday, May 25, 2015

Morning

Introduction - Overview of Course	ALL
1. Forces and Trends in Air Transportation	Hansman
2. Overview of Air Traffic Control Systems and Processes	Balakrishnan

Afternoon

3. Introduction to Airports and Airport Characteristics	Odoni
4. Airport Characteristics: Part 2	Odoni
5. Geometric Design of Airport Airside	Odoni

Tuesday, May 26, 2015

Morning

6. Airline Operations I,II	Hansman
7. Communications, Navigation & Surveillance Systems	Hansman

Afternoon

8. Terminal Area Operations	Balakrishnan
9. En Route and Oceanic Operations	Balakrishnan
Preliminary identification of projects	ALL

Wednesday, May 27, 2015

Morning

10. Airfield Capacity	Odoni
11. Airport Congestion	Odoni

Afternoon

Observational Visit to Istanbul Airport	ALL
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Thursday, May 28, 2015

Morning

12. Security Systems	Hansman
13. Irregular Operations and Disaster Response Planning	Hansman
- Airport Rescue and Fire Fighting	
- 727 Crash Example	
14. ATC Modernization – NextGen and Sesar	Hansman

Afternoon

- 15. Impact of Weather on Airspace Operations (Operations, Forecasting, Surveillance) Balakrishnan
- 16-17. Traffic Flow Management; Collaborative Decision-Making Project Discussions Balakrishnan
ALL

Friday, May 29, 2015

Morning

- 18. Airport Demand Management Odoni
- 19. Design of Passenger Terminals Odoni
- 20. Airspace and Airport Operational Data Analysis and Simulation Tools Balakrishnan

Afternoon

- 21. Performance Metrics Balakrishnan
- 22. Delay Propagation in the Air Traffic Network Balakrishnan
- 23. Assessing and Mitigating Environmental Impacts of Aviation Balakrishnan

Saturday, May 30, 2015

Morning

- 24. Airport Ownership and Management Odoni
- 25. Airport and ATC Economics and User Charges Odoni
- 26. Current Airport Trends Odoni

Afternoon

- Project Work,
Wrap-up, Feedback Balakrishnan, Odoni