

Istanbul Technical University

Aviation Economics and Financial Analysis

Draft of 31 October 2013

Course Outline

The following is an outline of course topics:

Day 1, Monday, November 18

Aviation Value Chain / Airline Demand and Supply / Airline Costs

Module 1 (2.5 hours)

Introduction: The Aviation Value Chain

- The role of aviation
- The social rate of return to aviation
- The value chain in aviation
- Performance in the aviation value chain
 - Investment
 - Rate of return
 - Credit rating
- The emerging role of ancillary products/services

Module 2 (2.5 hours)

Demand and Supply

- Main characteristics of supply in the airline industry
 - Perishability
 - Excess capacity
 - etc.
- Main characteristics of demand in the airline industry
 - Derived demand
 - Determinants of demand
 - Market demand segmentation
 - Different classes/types of passengers
 - Different classes/types of freight
 - Demand elasticities
 - etc.

Module 3 (2 hours)

Costs

- Cost classification (variable, fixed, total costs / short run vs long run costs)
- Cost relationships with distance, traffic levels, network size and scope

- Cost structure (fuel / labour / marketing & distribution / taxes / air navigation / airport fees / etc.)
- Economies of scale, scope and density

Day 2, Tuesday, November 19
Airline Business Models / Airline Pricing

Module 4 (3.5 hours)
FSNCs, LCCs, ULCCs and Charter Carriers

- Economic characteristics of LCCs/FSNCs/ULCCs/Charter
- Cost structure of carrier types
- Market impact of LCCs/FSNCs
- Is there a really a difference between FSNCs and LCCs?
- Future of LCCs/FSNCs

Module 5 (3.5 hours)
Pricing

- Revenue management: fares, buckets, restrictions, optimisation, network effects
- Load factors
- Break Even Load Factor Analysis
- The emerging merchandising approach: unbundling and rebundling, charging for value

Day 3, Wednesday, November 20
Airline Financial Economics

Module 6 (4 hours)
Financial Performance and Sources of Finance

Financial Performance

- Global airline industry performance
- Factors affecting airline performance
- The balance sheet of the airline business – why focus only on profit and not on assets is misleading
- Airline bankruptcies
- Key issues in airline finance

Airline Finance

- Institutional framework

- Sources of finance
 - Debt and equity markets
 - Aircraft leasing
 - Aircraft securitization
 - Asset sale/leaseback
 - Aircraft manufactures / Component manufacturers
 - Government funding
- Settlements: how airlines get paid
 - Cargo and passenger settlement banks (BSP, CASS, Airline Reporting Corp.)

Module 7 (3 hours)**Financial Planning**

- Business plan
- Budget planning
- Capital management
- Risk management (foreign currency / fuel price / etc.)

Day 4, Thursday, November 21**Airline Financial Analysis / Insurance****Module 8 (3.5 hours)****Financial Analysis**

- Airline financial statements
- Airline financial ratios
- Airline valuation

Module 9 (3.5 hours)**Insurance**

- Types of risk
- Insurance needs of air carriers
- Insurers vs re-insurance
- War risk insurance

Day 5, Friday, November 22**Airline Distribution Economics / Air Cargo****Module 10 (3.5 hours)****Distribution Economics**

- Selling the airline product
- Travel agents (bricks and mortar and online)

- Tour operators and integrators
- Global Distribution Systems – economics for carriers
- Cargo distribution – freight forwarders

Module 11 (3.5 hours)**Air Cargo**

- Market overview
- Cargo demand segmentation
- Main deck vs belly cargo: costing, demand differences, pricing
- Air cargo rates
- Air cargo services
- Cargo interlining
- Economics of dedicated cargo carrier vs combination carrier
- Integrator business models

Day 6, Saturday, November 23**Airline Mergers and Alliances / Airline Antitrust Economics and Analysis****Module 12 (2.5 hours)****Mergers and Alliances**

Mergers

- Market consolidation (M&A trends)
- Factors explaining M&A activity
- Foreign ownership

Alliances

- Liberalization
- Global airline alliances
- Bilateral and multilateral airline alliances
 - Interlining
 - Marketing alliances
 - Codeshares
 - Price / capacity /schedule coordination
 - Metal neutral joint ventures

Module 13 (2.5 hours)**Economics, Antitrust Review and Competitive Effects**

- Economics of mergers and alliances
- Antitrust review
 - Legal framework for evaluation and approval of mergers, alliances, revenue sharing
 - US / Canada / Europe / Australia
 - Antitrust policy and analysis
 - DOJ and DOT / CB / EC / ACCC
- Competitive Effects
 - Pro-competitive aspects of mergers/alliances
 - Anti-competitive aspects of merges/alliances

Module 14 (2 hours)**Airport Economics**

- The impact of infrastructure charges (airport and air navigation) and airline costs and competitiveness
- Pricing policies: what carriers have to pay
 - Residual pricing
 - Compensatory pricing
- Passenger charges
- Risk in the value chain
 - Airport vs airline markets
- Slots and capacity
- Regulation of prices
 - Rate-base rate of return
 - Cost plus
 - Price cap
 - Other (consultation / monitoring / trigger regulation / arbitration / contracts)