

# Istanbul Technical University

## Course: Aviation Economics and Financial Analysis

10-15 November 2014

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### Course Outline

The following is an outline of course topics, content and instructors.

#### **Day 1, Monday, November 10 - Dr. Michael Tretheway** **Aviation Value Chain / Airline Financial Performance / Sources of Finance**

##### **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 (4 hours) – Dr. Michael Tretheway**

##### **Financial Performance and Sources of 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.)

## 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

## **Day 2, Tuesday, November 11 – Dr. Michael Tretheway Insurance / Airline Financial Economics**

### **Module 3 (2 hours) – Dr. Michael Tretheway**

#### **Insurance**

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

### **Module 4 (2 hours) – Dr. Michael Tretheway**

#### **Financial Planning**

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

### **Module 5 (3 hours) – Dr. Michael Tretheway**

#### **Financial Analysis**

- Airline financial statements
- Airline financial ratios
- Airline valuation

## **Day 3, Wednesday, November 12 – Dr. David Gillen**

### **Airline Demand and Supply / Airline Costs / Airline Business Models**

#### **Module 6 (2.5 hours) – Dr. David Gillen**

##### **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

#### **Module 7 (2 hours) – Dr. David Gillen**

##### **Airline 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)
- Economies of scale, scope and density

#### **Module 8 (3 hours) – Dr. David Gillen**

##### **Airline Business Models / Airline Pricing**

##### **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

## **Day 4, Thursday, November 13 – Dr. Tuba Toru Delibasi** **Airline Mergers and Alliances / Airline Antitrust Economics and Analysis**

### **Module 9 (2.5 hours) – Dr. Tuba Toru Delibasi** **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 10 (2.5 hours) – Dr. Tuba Toru Delibasi** **Economics, Antitrust Review and Competitive Effects of M&A**

- 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

## **Day 5, Friday, November 14 – Dr. David Gillen Airline Pricing / Airline Distribution Economics**

### **Module 11 (3.5 hours) – Dr. David Gillen**

#### **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

### **Module 12 (3.5 hours) – Dr. David Gillen**

#### **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

## **Day 6, Saturday, November 15 – Dr. David Gillen Air Cargo / Airport Economics / Economics of Airport Security**

### **Module 13 (2.5 hours) – Dr. David Gillen**

#### **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

**Module 14 (2 hours) – Dr. David Gillen****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)

**Module 15 (2 hours) – Dr. David Gillen****Economics of Aviation Security**

- Survey of Current Practice across countries
  - U.S.
  - Canada
  - Australia/New Zealand
  - EU
  - Others
- Economic Perspectives
  - Aviation security – country and airport interdependencies
  - Production, technology and costs
  - Benefit-Cost Analysis
  - Public Goods and government financing
  - Charges and revenues in aviation security
- Emergent Issues
  - Increasing role of new technologies and processes
  - Aviation security as a public good
  - Behavioural screening
  - Harmonizing visions and layering