

Managerial Economics and Decision Sciences

4 majors:

Managerial Economics

Decision Sciences

Operations Management

Managerial Analytics

An electronic copy of this presentation

is at http://www.kellogg.northwestern.edu/departments/meds/programs/mba_program/major_req.aspx

Managerial Economics (MECN)

Examining decision-making in management

- ***What is managerial economics?***
 - Many firms create enormous amounts of economic value, yet they still fail in achieving sustained profitability
 - Managerial economics builds a framework that analyzes the creation and distribution of value in the market place
 - Managerial economics analyzes the interaction of fundamentals (demand, cost, nature of competition, and government policies) that determine prices, market size and share
 - Grounded in principles of basic microeconomic and game theory

Managerial Economics (MECN)

Examining decision-making in management

- *Core class:* MECN 430
 - Offered in winter.
 - Presents the basic microeconomic/game theoretic framework for the analysis of perfect competition, oligopoly and monopoly
 - A prerequisite for many management, strategy and finance courses that build on the basic microeconomic paradigm

Managerial Economics (MECN)

Examining decision-making in management

The managerial economics major:

- Key analytical tools serving both industry-based and function-based careers.
Especially suited for careers in management consulting
- Includes demand and cost analysis, pricing strategies, market structures, incentives and information, and game theory

Managerial Economics

Examining decision-making in management

Students
are required
to take any
three of the
following
courses that
are offered:

MECN 441 Competitive Strategies & Industrial Structure

MECN 446 Pricing Strategy

MECN 450 Macroeconomics

MECN 499 Independent Study

MGMT 444 Health Care Economics & Strategy

MGMT 452 Strategy & Organization

ACCT 454 Management Lab (Formerly LEAP)

SEEK 470 Public Economics for Business Leaders: Federal Policy

MGMT 441 Intellectual Capital Management

For waiver information, visit http://www.kellogg.northwestern.edu/departments/meds/programs/mba_program/waiver-info.aspx

Decision Sciences (DECS)

- ***What is decision sciences?***
- Most important decisions are characterized by uncertainty about the future. Moreover, decisions may be made over time (*dynamic*) and their payoffs may depend on what other people do (*strategic interaction*)
- Decision sciences build analytical frameworks to help you make, understand and communicate about such decisions
- Decision science techniques have become increasingly important in general consulting, oil and natural gas, automobile, transportation and pharmaceutical companies
- Grounded in principles of probability, statistics, dynamic processes and game theory

Decision Sciences(DECS)

- *Core classes:* DECS 430A and 431
 - Taken in pre-term and fall
 - Presents the basic framework for decisions under uncertainty, involving probability theory and statistics
 - The prerequisite tools for most other courses at Kellogg

For waiver information, visit http://www.kellogg.northwestern.edu/departments/meds/programs/mba_program/waiver-info.aspx

Decision Sciences

Students are required to take any three of the following courses that are offered:

DECS 450 Decision Making & Modeling

DECS 452 Game Theory and Strategic Decisions

DECS 499 Independent Study

DECS 915 Analytical Consulting Lab

ACCT 454 Management Lab

MECN 446 Pricing Strategies

MECN 451 Business and Economic Forecasting

OPNS 450 Analytical Decision Modeling

MGMT 469 Empirical Methods in Strategy

Operations Management (OPNS)

Managing the supply chain of processes and resources

- ***What is Operations Management?***
 - Along with Marketing and Finance, Operations is one of the three key functions in most organizations
 - Operations is at the heart of any firm's ability to transform inputs into the goods and services that it supplies its customers.
 - Well-managed ops can provide significant strategic advantage to a firm: Zara, Amazon, Toyota, etc.
 - On the other hand, a lack of focus on ops can be a significant barrier to success as demonstrated by many e-commerce firms.

Operations Management (OPNS)

Managing the supply chain of processes and resources

- *Core class: OPNS 430*
 - Usually taken in spring
 - There are a limited number of section in winter
 - MMM's take OPNS 440 in fall
 - Presents an overview of the strategic impact of operations and how to improve processes and supply chains

Operations Management (OPNS)

Managing the supply chain of processes and resources

- The operations major is designed with two specific career paths in mind: consulting and general management.
- High demand in firms focusing on quality - health services, government, transportation, retail, airlines, insurance, banking and others.
- Possible major combinations:
 - Finance (operating functions of banks and other financial institutions)
 - Marketing (management of complex inventory-distribution-warehousing systems linking retail, wholesale, and manufacturing)

Operations Management

Managing the supply chain of processes and resources

Students are required to take any three courses meeting these criteria:

Any 400 level OPNS course above 440

Any 900 level OPNS course above 900

Or **DECS 915** Analytical Consulting Lab

For more information, visit http://www.kellogg.northwestern.edu/departments/meds/programs/mba_program/waiver-info.aspx

Managerial Analytics

- ***What is managerial analytics?***
- In recent years, a significant fraction of Kellogg graduates accept consulting positions upon graduation.
- Kellogg faculty are at the forefront of developing analytical models and methods
- Courses focus on:
 - quantitative skills (e.g., using statistics, optimization, or simulation methods)
 - analytical frameworks (using formal modeling based on microeconomics and/or game theory)
- Possible major combinations:
 - Accounting
 - Finance
 - Marketing

Managerial Analytics

Students must take four courses from these lists, including at least one from each category:

Decision Frameworks:

- DECS 450 – Decision Making & Modeling
- MECN 450 – Macroeconomics
- MECN 446 – Pricing Strategies
- DECS 452 – Game Theory and Strategic Decision

Analytical Strategy:

- MECN 441 – Competitive Strategy and Industrial Structure
- OPNS 454 – Operations Strategy
- MGMT 452 – Strategy & Organization

Quantitative Models:

- DECS 915 – Analytical Consulting Lab
- MGMT 469 – Empirical Methods in Strategy
- MKTG 450 – Research Methods in Marketing
- OPNS 450 – Analytical Decision Modeling
- OPNS 455 – Supply Chain Management
- OPNS 482 – Service Operations
- OPNS 923 – Enterprise Risk Management