SYLLABUS: Operations Management

Department Name: GreenMBA
Course Title: Operations Management
Units: 3
Semester Offered: Fall, 2009
Course Meeting Days/Time: As defined herein
Source Meeting Place: Guzman 307
Prerequisites: 3rd Semester GreenMBA

Instructor Information

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Office Hours: email or call instructor to arrange out-of-class help.

Course Description

Operations Management is the systematic direction and control of the processes that transform inputs into finished goods or services. Operations is one of the primary functions of a firm. While marketing induces the demand for products and finance provides the capital, operations *designs and produces* the product, *delivers* the product and *supports* the product (goods and services).

This course provides an introduction to the concepts and analytic methods that are useful in understanding the design and management of a firm's operations. Our aim is to (1) familiarize you with the problems and issues confronting operations managers, and, (2) provide you with language, concepts, insights and tools to deal with these issues in order to gain competitive advantage through operations. Because the course deals with the management of "processes", it applies to both for-profit and non-profit organizations, to both service and manufacturing organizations, and to virtually any functional area or industry.

During your time in class we will pull from assigned readings and apply insights to discuss case studies and class project(s). Lectures will be used to present key terms, concepts and tools. Simulation exercises will be used to help us more fully understand the operating environment. Guest speakers will help provide further insight into the real-world application of these concepts. Review, analysis and recommendations for the operation for an actual business will be used to assimilate and apply lessons learned ("Final Project")

General Education or Prerequisite Requirements

Unless otherwise approved by the program director, students must have successfully completed their first and second semesters of the GreenMBA program.

Course Student Learning Outcomes

Learning outcomes are defined for each class. Please refer to the Course Schedule herein.

Text and Resources

Required Course Books:

Strategic Operations Management, a Value Chain Approach, David Walters and Mark Rainbird, Palgrave MacMillan, 2007, ISBN-13: 978-0-230-50765-4

Lean Solutions, by James P. Womack and Daniel T. Jones, Free Press (Simon & Schuster), 2005, ISBN-13: 978-0-7432-7778-5

Reinventing Corporate Growth, Gene Slowinski, Alliance Management Group, 2005, ISBN: 0-9768327-0-4

Other Required Readings: Other readings may be assigned throughout the semester as the course progresses.

Recommended Reference and Reading List: The following books are provided as references, for those students wishing to explore course topics in greater detail and/or from other perspectives:

*Green Manufacturing, Case Studies in Leadership and Improvemen*t, Association for Manufacturing Excellence, 2008, ISBN; 978-1-56327-389-6

Breaking the Musashi Code: Transcending Competition Through Visionary Strategy, Matthew C. Heim, Visionary Partnership Press, 2007, ISBN: 0-9795463-0-3

Open Innovation, Henry Chesbrough, Harvard Business School Press, 2006, ISBN-13: 978-1-4221-0283-1

Online Components of the Course

There are no online components to this course.

Academic Honesty Honor Code

A student must submit work that represents his or her original words or ideas. If a student uses the ideas or words of others, they must be properly cited.

Diversity

This course welcomes and encourages a diversity of viewpoints. Approaches used to help with this aim include:

- New material is offered to challenge basic concepts and to suggest different ways to approach materials in the course. For example, we will consider topics of “globalism” and “open source” for both their pros and cons.
- We will focus on diversity of operations: the global, regional and local. We will avoid representing groups or individuals as victims or as exoticized "others." We will try to use empathy and realism, not sympathy and paternalism.
- Through discussions and presentations will ask new questions about all material(s) under study. You are offered the opportunity in papers and

presentations to explore diverse materials beyond the assigned reading for the course.

o We will "destabilize" your assumptions of centrality – considering both your points of view and considering other competing points of view.

o We will use of materials speaking to personal or individual experience: These include guest speakers, and a class tour, if one can be arranged.

Assessment

Students must attend classes and complete all assignments in order to earn a passing grade for the course.

Grading

Grades will reflect a student's performance against objectives; not graded as a comparison to other student's performance. Your final letter grade scale will based on a percentage of the possible course points. Those taking the course on a pass/fail basis need to earn at least 80% of the available points to pass:

A Pass 95-100	C Fail 74-76
A- Pass 90-94	C- Fail 70-73
B+ Pass 87-89	D+ Fail 67-69
B Pass 84-86	D Fail 64-66
B- Pass 80-83	D- Fail 60-63
C+ Fail 77-79	F Fail Under 60

Overall scoring of student performance is broken down as follows:

Class Attendance & Participation 7.5 points per 4.5-hour period attended – prorated if a class is partially attended.	60	33.3%

Class Homework: Each homework assignment is worth 60 points divided by the total number of homeworks assigned. **Unless otherwise stated by the Instructor, written homework is due 48 hours before the start of the next class. This gives the instructor time to review homework prior to the next class.** **If homework assignments were worth 5 points each, then:** 0 – Did not submit assigned homework for that class. 3 – Late. Submitted homework late (poor work received late = 0 points). Homework submitted on or before its due date will be scored as follows: 0 – Unacceptable: Poor knowledge of subject matter and little/no effort made to demonstrate or exemplify new learnings. 3 – Adequate: Demonstration of knowledge of topics. Minimal effort extended to exemplify. 5 – Excellent: High level of comprehension with evident effort made to demonstrate and exemplify such knowledge.	60	33.3%
Final Project **The Final Project is due on the last day of class.** 40 –Did not submit a Final Project. 50 –Late: Submit Final Project late (maximum number of points). Final Project submitted on or before its due date will be scored as follows: 47 - Poor demonstration of knowledge of topics. Minimal effort extended. 50 – Adequate level of comprehension and preparation demonstrated: Demonstrated knowledge of topics but did not make extra efforts to expand learning. 55 – Good understanding of topics, and brought new insights and learning into the discussion. 60 - Excellent level of comprehension. Demonstrated excellent understanding of topics, and brought new insights and learning which helped expand the student's knowledge and understanding of the topic(s), and helped pull together various lessons and knowledge into a more holistic understanding.	60	33.3%
TOTAL	180	100%

Note: There is no make-up allowed for missed classes. If a student is absent for a class they receive zero points for attendance and participation. A "class" is considered a 4.5 hour block of time.

Expectations of Students

Prior to each class, preparatory readings and homework assigned for that class must be completed.

Homework assignments are defined herein and/or will be provided at the end of a class and/or distributed on-line between class sessions. These homework assignments will be designed to have students apply lessons learned in class, and to present work to the class and the instructor. Such "presentations" may be formal (written or orally) and/or via class discussions. In some cases, students will be required to facilitate a discussion. These activities are designed to hone presentation and discussion skills, as well as student understanding of Operations Management topics and practices.

Turning in Homework: All written work should be professional in appearance, spelling and grammar. To meet this expectation, assignments should be completed using a word processor and emailed to the Instructor. Text should use 12-point font, single or 1-1/2 line spacing.

Unless otherwise stated by the Instructor, written homework is due 48 hours before the start of the next class. Any written homework assignments received after this time is considered "late"

Course Schedule

Sun 9/14 8-12:30	• Purchase course books • Consider Project Topic	**Learning Outcomes:** (1) Introductions. (2) Know how to succeed in this class. (3) Learn the jargon and fundamentals of innovation, "Lean" production, six-sigma, and operations management. (4) Learn the importance of a systems approach in OM. Class Activities & Discussions: • Review class syllabus • What is OM? • Value-Driven systems • A systemic view of operations: Value Chain vs. "Value Ring" • Operational cycles and the influence of strategy (a cybernetic view) • The process approach: Lean vs. Six Sigma • The soft side of OM: Balancing the legitimate and shadow networks • KPI's and Metrics: Where they work and where they don't • Emergent vs. Optimized systems • Integrity, Systems/Critical Thinking • $S=CI^2$

Sun 9/28 8-12:30

Reading

Strategic Operations Management
Chapters 1, 6, 7, 8, 9

Homework:
Read case studies at the end of chapters 1 and 9. Be prepared to facilitate a class discussion by preparing 5-7 facilitation questions.

Learning Outcome: Learn the basics of, and differences between Supply Chain, Demand Chain, Value Chain, Value Stream and Value Network. Learn how to use each to evaluate and manage value.

Class Activities:

- Value Chain
- Supply Chain
- Demand Chain
- Value Streams
- Value Networks
- Impacts of Sustainability

Class Simulation Exercise or Case Studies:

Sun 10/12 8-12:30

Reading

Strategic Operations Management
Chapters 2-5

Lean Solutions
Scan all chapters

Homework:
Read case studies at the end of chapters 2 and 5. Be prepared to facilitate a class discussion by preparing 5-7 facilitation questions.

Learning Outcomes: Review the perceptions of, and techniques for managing value. Learn the philosophies of Lean and Six Sigma, and how to apply a hybrid model.

Class Activities:

- Value Viewpoints
- Value Management
- Business Process Management
- Six Sigma
- Lean

Sun 10/26 8-12:30

Reading
N/A

Homework:
Submit your plans for your Final Project. This should be a formal 3-5 page proposal. Be prepared to present your topic.

Learning Outcomes:

- Learn to integrate EMS/ISO4000 and Natural Step principles to the design of operational processes. Learn to present and evaluate a formal operations proposal

Class Activities:

- EMS/ISO14000 and Natural Step
- Process mapping exercise
- Student Presentations: Proposal of project topic

Sun 11/9

8-12:30

Reading

Strategic Operations Management
Chapters 10 and 11

Homework:

Read case studies at the end of chapters 10 and 11. Be prepared to facilitate a class discussion by preparing 5-7 facilitation questions.

Learning Outcome: Learn the how different business models are developed based on product and industry. Develop an understanding of the design and management of Key Performance Indicators and Process-Level Metrics.

Class Activities:

- Product-Based Business Models
- Service-Based Business Models
- Exercise: Develop a business model concept and organization diagram for a new "green" business.
- Key Performance Indicators
- Process-Level Metrics

Sun 11/23

8-12:30

Reading

N/A

Homework:

Prepare a "Value Chain" representation of your new business model (previous class), and show the various value targets (customer, firm, shareholder)

Learning Outcome: Learn the applications of sustainability measures throughout the value chain. Learn how to leverage sustainability gain throughout a value network.

Class Activities:

- Exercise: Map your new business at a high level; Develop a KPI-Metric tree for your new business
- Review the value chain, and the broad-reaching applications of sustainability measures throughout
- Learn to leverage the value network for sustainability gain
- Case Discussion - TBD

	Reading	**Learning Outcomes:**
Sun 12/7	*Reinventing Corporate Growth* Chapters 1-5	Learn the concept and process of innovation within an organization. Learn the concept of open innovation, and the impacts it can have on business, the consumer and the environment. Develop an understanding of the unique operational needs of non-profits. Develop a facilities-based understanding of sustainability, from a triple-bottom-line perspective.
8-12:30	**Homework:** Prepare to present a formal Project Status Review presentation, discussing the status, challenges and next-steps of your project (approx. 20 min. per team)	Class Activities: • Innovation • Open Innovation • Non-Profit Operations • Facilities Design & Management • Class Exercise: Small business facility design that incorporates the triple-bottom-line concept • Project Status Reviews

	Reading	**Learning Outcome**:
Sun 12/21	*Green Manufacturing,* Chapter 3 (prepare to facilitate case with 4-5 questions)	Presentation of final reports
8-12:30	**Project Finals** Final presentation and hand-in of final report Time: approx. 25 min. with 10 min. Q&A and feedback	Class Activities: Present final reports, with time for Q&A and peer/faculty feedback

Project Guidelines:

- Select a small business or business unit of a larger company
- Map the existing business process (As-Is)
- Develop a Value Chain or Value Network representation of the redesigned

business
- Develop an optimized process (To-Be) that includes a balance of:
    - Lean concepts
    - Quality concepts
    - Sustainability measures (triple-bottom-line, if possible)
- Discuss the value-add of the new design
- Determine process KPI's and process-level metrics

Suggested (but not mandatory) Project Deliverable Format:

- Executive Summary
- Project Overview
- Scope
- Existing Business: include As-Is Process Maps, with descriptions, existing metrics, pain points and preliminary recommendations
- Recommended Business Redesign: include Value Chain or Network representation of the proposed business, To-Be process flows with descriptions and justifications, KPI's and metrics.
- Conclusions & Recommended Next Steps
- Individual insights and awareness (a summarized journal of each student's learnings and new insights developed throughout the project) THIS IS MANDATORY!!!

Disclaimer

This syllabus is subject to modification. The instructor will communicate with students on any changes.