Syllabus OST 802
Operational Analysis & Decision-Making
Fall 2013
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COURSE OVERVIEW

Escalating and expanding demands for customer service, productivity, product quality, global competitive markets - What a great time to be taking a course on operations!

From the simplest frame - operations management is the sum total of all the individuals and resources that an organization allocates to the production of outputs (goods and/or services). Goods are physical outputs - items that are tangible; they can be touched. Services are activities - occurrences that are experienced. Services tend to have strong psychological components associated with them; services have a value that the consumer defines based on expectations.

Operations management is transformative. Operations management includes all the processes that are required to convert inputs (raw materials, supplies, equipment, facilities, labor, energy, etc.) into outputs (examples of goods include houses, cars, clothing, books, etc.; examples of services include health care; legal advice, entertainment, etc.). Operations management *adds value* to inputs during their conversion into outputs.

Three important activities must occur to assure that outputs meet (or better yet exceed) the expectations of the consumer: measurement, feedback and control. Measurements need to be taken throughout the activities sequence to guarantee that previously established output standards are being met. An understanding of statistics is helpful when determining what to measure, how to measure it, and what the measurement analysis indicate. Feedback is the process through which the information obtained from the measurements is communicated into the activities sequence to allow corrective actions (control) to be instituted. Measurements, feedback and control are often orchestrated through quality assurance (QA) / continuous quality improvement (CQI) policies and procedures.

The *overarching goal* of this course is to introduce and / or reinforce an understanding of the concepts and principles that should be considered prior to the initiation of, during the implementation and execution of, and after the completion of <u>any project that produces an outcome</u>; the emphasis of this course will be on services not goods.

The *overarching course objective* is to instill and/or further develop skill sets required to direct and control the processes involved in the conversion of inputs into outputs.

Although outputs (goods and services) differ in *what they are* aspects, they are quite similar from the perspective of *how* organizations should address them through operations management.

COURSE OBJECTIVES

The ability to analyze operations and make important decisions is increasingly critical to not only the success but also the long-term viability of organizations. The modules, reading assignments and case analyses for this course were selected and designed to help you:

- learn to differentiate goods (tangible items) from services (experiences)
- maximize the added-value that occurs as inputs are transformed into outputs
- understand the vital differences between strategic and tactical decisions
- make better operational decisions based on evidence (statistics) and through teams
    - trade-off analysis
    - time management
    - learning from mistakes
    - establishing priorities
    - controlling variability / risk
- manage supply chains
    - inputs / capacity / forecasting / processing / logistics / location
- better engage in quality assurance / continuous quality improvement activities
- understand the interaction between budgets, investments and funding models

REQUIRED TEXT

There is no assigned textbook for this course. Six journal articles are assigned; a document with active links to each article is posted on the ANGEL course site.

COURSE REQUIREMENTS

Active Course Participation
Graduate students are expected to be critical readers and thinkers. Students are expected to take notes while reading and listening to online modules; write down questions and issues to be explored further. Active participation in online course discussions and timely responses to emails from faculty and/or classmates is also expected.

COURSE GRADE

Online Examination: must be completed before 10/20/13 at 11pm   40 points
1. The exam will be available 10/16 @11am through 10/20 @ 11pm
2. The exam will cover Section 1 & 2 modules (see below). An exam blueprint will be provided that provides specific exam details.

Analysis of an Operations Management Case   60 points

 * A passing grade is ≥ 70% (you must obtain at least 70 out of the 100 points available).
 * On your transcript, your course grade will be listed as a **P** (Pass) or **N** (No Pass).
 * Remediation is at the discretion of the course coordinators for those eligible.

COURSE COORDINATORS

Section 1 - Statistics

Donald Sefcik, DO, MBA
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Director of Academic Innovation & Psychometrics
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Sections 2 & 3 – Decision Making and Case Study

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ACADEMIC INTEGRITY
Article 2.3.3 of the Academic Freedom Report states that "the student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards." In addition, the College of Education adheres to the policies on academic honesty as specified in General Student Regulations 1.0, *Protection of Scholarship and Grades;* the all-University Policy on *Integrity of Scholarship and Grades*; and Ordinance 17.00, Examinations. (See *Spartan Life: Student Handbook and Resource Guide* and/or the MSU Web site: www.msu.edu.)

Therefore, unless authorized by the instructor, you are expected to complete all course assignments, including homework, lab work, quizzes, tests and exams, without assistance from any source. You are expected to develop original work for this course; therefore, you may not submit coursework you completed for another course to satisfy the requirements for this course. Students who violate MSU academic integrity rules may receive a penalty grade, which could include a failing grade on the assignment, in the course, or both. Contact the instructor if you are unsure about the appropriateness of your course work. (See also http://www.msu.edu/unit/ombud/dishonestyFAQ.html)

COURSE SCHEDULE
This course begins on Wednesday, August 28, 2013, and ends on Friday, December 6, 2013.

Section 1   **Statistics (August 28th through September 15th)**
Donald Sefcik, DO, MBA

- 15-item online quiz: Basic Statistical Concepts – this must be completed before watching the online modules.
- 3 online modules
    - Basic Concepts
    - Descriptive Statistics
    - Inferential Statistics
- 6 *Harvard Business Review* articles (document with links in Angel)

Section 2   **Decision-Making (September 16th through October 20th)**
Keith Niblett, Assistant Director, Executive Development Programs
MSU's Broad College of Business

- ~ 15 hours of online modules: Decision-Making Principles & Processes

Section 3   **Case Analysis (October 21st through December 6th)**
Brandy Church, MA
Kevin McMahon, MBA

- Case and Instructions will be available on/before October 21, 2013

Criteria that will be used to evaluate assignments
- ✓ Analysis and Perspective
- ✓ Thoroughness and Accuracy
- ✓ Thoughtfulness
- ✓ Originality
- ✓ Citations - relevance to Section 1 modules and reading assignments