Georgia Institute of Technology
Scheller College of Business
MGT 4803 Management of Healthcare Operations

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The healthcare *industry* is facing a set of significant challenges on several fronts including ensuring availability of (or access to) care, enhancing quality of care, and containing costs – challenges similar to those faced by other industries. Moreover, according to a study conducted by the Institute of Medicine of the National Academies, "the U.S. healthcare delivery system does not provide consistent, high-quality medical care to all people." Thus, healthcare is on everyone's mind – citizens whose premiums are increasing, the Obama Administration working to ensure the successful implementation of the *Patient Protection and Affordable Care Act of 2010* (PPACA) that was upheld last year by the US Supreme Court, and the new 113th Congress that has its own views and solutions for the *ailing* industry. Chief executives rank healthcare as one of their top issues that affect the profitability of their corporations. Amidst all these developments, our system is regarded by many as being the best in the world. In short, it is the best time to be learning about the healthcare enterprise!

The healthcare industry's challenge is to deliver its five *R*s – the *right* treatment to the *right* individual at the *right* time in the *right* setting and at the *right* price. Companies such as Wal-Mart and Procter & Gamble focus on delighting the consumer by delivering the *right* product of the *right* quality at the *right* time in the *right* quantity and at the *right* price. These companies are able to realize their objectives through effective implementation of technologies (e.g., information technology) and management practices (e.g., process reengineering, supply chain management). When other industries have been successful in realizing the five *R*s, why should the healthcare industry lag behind? This course has been designed to explore the roles of management practices and technology in addressing the critical challenges and harnessing opportunities in a timely manner for transforming the healthcare enterprise.

Learning Objectives: The learning objectives for the course are as follows:

1. Learn the structure of a patient-centric healthcare continuum (ecosystem) and gain an understanding of the challenges facing the system.
2. Identify the opportunities for transforming the healthcare ecosystem by applying:
   a. Health Information Technology and Systems such as Electronic Medical Records (EMR), Computerized Physician Order Entry Systems (CPOE), and National Health Information Infrastructure (NHII);
   b. Medical technologies such as wearable biomedical systems; and
   c. Operations Management practices such as lean principles, process reengineering, and supply chain management.

3. Understand the regulatory processes for pharmaceuticals and medical devices to ensure patient safety.
4. Explore the role of innovation and emerging trends in enhancing healthcare such as the Leapfrog initiative, retail store-front clinics, and accountable care organizations.
5. Understand the barriers to transformation of healthcare including the adoption of management practices and technology.

The Structure: The course will be taught as a sequence of modules, with each one laying the foundation for the next; this structure – in seemingly discrete dimensions – has been chosen for pedagogical convenience. However, you should be aware that reality is far less ordered. What's more you may find me on occasion simulating real-life chaos in the classroom! The simulation is complete and effective only when you come fully prepared to class. Thus, the onus for deriving maximum value from this course lies as much with you as with me!

1. Patient-Centric Healthcare: A Conceptual Framework
    a. The Healthcare Continuum
    b. The Transformation Enablers: Technology and Management Practices
    c. The Challenges facing Healthcare and the Opportunities for Transformation

2. Enabling Patient-Centric Healthcare: Leveraging Technology
    a. Health Information Technology and Systems including EMR, CPOE and NHII
    b. Wearable biomedical systems such as the Smart Shirt
    c. e-Health: Social Media and Privacy
    d. Implementation Challenges and Business Case for Health IT

3. Driving Operational Excellence: Leveraging Processes
    a. Lean Principles, Six Sigma and Framework for Quality of Care
    b. Supply Chain Management and the Cost of Care
    c. Risk and Safety Assessment in Care Delivery

4. Ensuring Patient Safety: Understanding the Regulatory Process
    a. The Pharmaceutical Industry Profile
    b. The New Drug Development and Approval Process
    c. The Medical Device Approval Process

5. Looking Ahead: Innovation and Emerging Paradigms
    a. The Leapfrog Group
    b. Retail Store-front Clinics
    c. Accountable Care Organizations
    d. Barriers to Transformation

6. Project Presentations

Evaluation of Learning: The proposed scheme to help you assess your learning is as follows:

Mid-term examination (Feb 20th)	→ 20%
Two Case Write-ups (Group)	→ 20%
Project (Group)	→ 20%
Class Participation	→ 15%
Final Exam (TBD)	→ 25%

Learning is a collaborative process. Therefore, careful ***prior*** reading of the materials and preparation of cases scheduled for discussion, thoughtful participation, and listening during the class will help you (and me) get the most out of the course! **Please turn off all laptops and other mobile devices during class (unless used for note-taking).**

Case Write-up: The case write-ups will be carried out by groups of four students each. Group assignments will be made during the week of January 14th. The write-up should be a maximum of five single-spaced pages excluding supporting exhibits, as needed. The questions will be posted on the t-square website for the course. In addition to the responses to the specific questions, you may provide other insights and learning you have gleaned from the case in a section called "Additional Learning". **Your names should appear only on the back of the last page.**

Term Project: The Term Project gives you the opportunity to explore one facet of the healthcare enterprise related to your area of interest and/or specialization, viz., ITM, OM, OB, Finance, Accounting, etc. in greater depth. You can decide on the specific topic by the time the first module is being completed. The paper will be due in class on April 17th; it should be a maximum of 10 single-spaced pages, excluding the supporting exhibits and bibliography.

The Georgia Tech Academic Honor Code: You are expected to be familiar with the Georgia Tech Academic Honor Code and uphold it at all times (http://honor.gatech.edu/plugins/content/index.php?id=9).

Course Materials: There is no single textbook that addresses the topics planned for the course. Therefore, a collection of articles has been put together; the course packet with the articles and cases is available from www.study.net. This is essential for the course.

Reference Books / Recommended Reading

- "Crossing the Quality Chasm: A New Health System for the 21st Century", Committee on Quality of Healthcare in America, Institute of Medicine, Washington, DC, 2001.
- "To Err is Human: Building a Safer Health System", Committee on Quality of Health Care in America, Institute of Medicine, Washington, DC, 2000.
- Lee, T.H., and Mongan, J.J., Chaos and Organization in Health Care, The MIT Press, 2009.
- Gawande, A., The Checklist Manifesto: How to Get Things Right?, Henry, Holt and Company, New York: NY, 2010.
- Pronovost, P., and Vohr, E., Safe Patients, Smart Hospitals, Penguin Group USA, 2010.
- Regular reading of *The Wall Street Journal*, *The Economist*, and *BusinessWeek* for current articles on healthcare. You are encouraged to share your findings with the class.