Global Executive Ph.D. Track in Industrial Engineering
http://engineering.wayne.edu/ise/get/index.php

IE 8941: From Idea through Launch: Products and Services—Part I (2 Credits)
Course Syllabus - Winter 2014

Instructor: Dr. Leslie Monplaisir, Department Chair - ISE Department

Classroom: ISE Conference Room, Industrial & Manufacturing Engineering Department
Contact: ad5365@wayne.edu
Office: Room 2143, MEB 4815 Fourth Street, Detroit
Office Hours: TBA by module faculty
Web Site: http://blackboard.wayne.edu

Prerequisites: Executive Ph.D. Track Candidate Status
Software: None

Program Mission: To provide the opportunity for working executives to combine real-world experience with academic skills to create a new class of technical leaders who embrace integrative thinking, are globally aware, and are capable of producing sustainable value to any organization throughout the world.

Course Objectives: This Executive PhD track core course provides you the opportunity to thoroughly integrate knowledge, theory, and information from every aspect of the decision and management process that a business goes through in launching products and services and sustaining profitability. It also provides you with an excellent avenue to see the broader scope of operations and the consequences of these decisions and actions.

The course is divided into ten modules and maps the processes and progression from product or service innovation to development and launch. Innovation, marketing, lean product development, managing global product development teams, and alliances are the sorts of topics and areas explored in this course. The course is developed with a set of core principles. The relevant core principles will be examined in each module and serve as a theme for the course. The principles are human infrastructure, value creation, clock speed, robust & capable processes, balanced and level workflow, and culture. This will give you better cross functional collaboration which can lead to an accelerated product development process and improved planning efforts.

This core course will be team taught in a novel and holistic way by a group of faculty from engineering, business, anthropology, and industry leaders. The courses will also involve leading academic and industrial experts from around the globe as guest speakers on a variety of topics.

The total course is split into two parts for convenience (IE8941 and IE8942), carrying a total of 5 credits.

Approach: The Industrial and Manufacturing Engineering Department is taking an integrated approach to the curriculum for the Global Executive Ph.D. Integration in teaching and learning is derived from a systems perspective on both content and delivery that involves learning partners and teachers together in co-creating an educational experience. Learning partners will bring years of experience to the classroom and an eagerness to learn new approaches to real-world business issues in a global economy. Teachers will contribute integrative models and knowledge from contemporary theory and research to work with learning partners in framing problems and developing applied approaches to solving them.

Adopt a modular approach to incorporate functional and specialized knowledge into a holistic and systems-based view of each major topic or course, drawing upon the expertise of development and delivery team members as needed and incorporating the key principles into each module topic.
Course Format: The course is divided into modules. Each module will be led by a team of academic and industrial faculty and will involve: Case studies, Benchmark companies, Guest speakers, Assignments, Text/readings (100+ pages), Studying service sector and sustainability aspects, Review of recent dissertations, and Identification of potential research areas.

Course Modules: Several modules map the process of Innovation, Product Development, and Launch. IE8941 covers the following six modules:

- Module 1: Overview of the elements of Global PD and PD Process – Jan 10
- Module 2: Opportunity Identification and Selection; Product and Customer Requirements; and Global Business – Feb 7 and Mar 7
- Module 3: Global Product Testing and Evaluation and Financial Analysis Apr. 4
  - Product Development Organization and Team Management - Apr 4
- Module 4: Product Launch Strategies and Management - Apr 25
  - Global Product Development Case Study – Apr 25

Course Modules: Several modules map the process of Innovation, Product Development, and Launch. IE8942 covers the following four modules:

- Module 1 - Value Analysis / Value Engineering in PD and Knowledge Management
- Module 2 - Design For Six Sigma -
- Module 3 - Design for Human Factors in PD
- Module 4 – Lean PD
- Integration Project

References: Multiple books will be part of the course to be used as references. These references are identified in the module specific syllabi. Learning partners are not required to purchase the books or read the entire books. All reference books are also available through the Executive PhD Track Library. The main reference text for this course is “New product Management” by Merle Crawford and Anthony Di Benedetto, Tenth Edition, McGraw Hill 2010.

Articles: A variety of engineering and business articles and case studies from such sources as Harvard Business Review, Management Science, and Sloan Management Review will be made available through the course website for individual modules. For more details, see the module specific syllabi.

Reading Assignments: The reading assignments will help you better understand the material covered in class. Read the assigned material prior to class discussion. For additional instructions, see module syllabi.

Case Studies: Learning partners will have to summarize several cases and suggest solutions to issues raised by the case. Most case studies, as is the case with many problems in the real-world, do not necessarily have a single best solution. All solutions tend to involve tradeoffs. You are responsible for addressing the issues raised in a holistic and integrated way. All case study reports are expected to be typed and the typical report will be 8 to 12 single spaced pages. The issues/questions to be addressed are posted on the course website. For more details, see the module specific syllabi.

Integration Project: Individual learning partners will systematically and comprehensively evaluate a “distressed” company of their choosing with regard to how well the company is managing the process of ideation, product/service design and development, marketing, and product/service launch. Given that the project scope is limited to “Idea through Launch”, focus should be on companies that design and develop products/services and not companies that are just in the business of retail, distribution, or manufacturing (these companies will be studied next year under “Launch through Sustainability” course). While the project may not touch upon all topics/modules covered in the Idea through Launch Course (IE8941 and IE8942), it is expected that the analysis would involve comparison of the performance of the target company with market leaders in that business segment. Factors such as product portfolio management (novelty, functionality, mix, balance), customer satisfaction (initial quality, durability, styling), time to market, market share, rate of innovation, product development efficiency (speed, cost, platforms, modularity, component commonality), and financial performance are expected to be studied. Manufacturing (performance, quality) and supply chain (distribution, logistics) aspects are outside the project scope and will be studied under the Integration Project for Launch through Sustainability. Individuals are expected to offer some concrete recommendations and an actionable draft turnaround plan for the target company with strong justification and rationale for the recommendations.

It is expected that most of the information necessary for carrying out the analysis will come from public domain sources (including target company website). Assuming that the company is a U.S. publicly traded company, quarterly and annual

Reports are expected to be between 20 and 30 pages (single spaced, 1” margins, 12 point font), including references and appendices. Here are some approximate milestones for the project: Pick a Company (September 21st), Proposal Outlining Project Scope/Analysis (2 Pages; October 19th), Major Draft Report for Feedback (November 23rd), and Final Report (December 14th). All documents should be submitted using the Digital Drop-box function of the course website on Blackboard. Presentations will be made on December 21st from 1PM-4:30PM (15 minutes for individual presentations with an additional 5 minutes for Q&A). A team of faculty and industry executives will grade reports.

Special Needs: If you have a documented disability that requires accommodations, you will need to register with Student Disability Services for coordination of your academic accommodations. The Student Disability Services (SDS) office is located at 1600 David Adamany Undergraduate Library in the Student Academic Success Services department. SDS telephone number is 313-577-1851 or 313-577-3365 (TDD only). Once you have your accommodations in place, we will be glad to meet with you privately during office hours to discuss your special needs. Please refer to the SDS website for further information about students with disabilities and the services we provide for faculty and students: http://studentdisability.wayne.edu

Attendance: We strongly recommend that learning partners attend all classes in person. In case of travel, join the class remotely. Contact Mr. Mark Garrison at mark.garrison@wayne.edu for making arrangements for remote participation.

Honesty: Learning partners registered for this course should obey the rules of academic integrity and follow the code of conduct. Please look at the following document: http://www.doso.wayne.edu/codeofconduct.pdf.

Grading: The overall grade will be based on performance in individual modules, with each module carrying equal weight. See module specific syllabi for assessment criteria.