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BUSINESS/MBA

GBUS 465-D10 (CRN#14870)/MSE 431-D10 (CRN#14869). Creating Breakthrough Innovations (3)

The main objective of this course is to provide a conceptual understanding of the process of innovation with primary focus on product design, development and marketing of highly successful products and services. The principal objective of this course is to develop students skills in three areas: 1) Conceptual understanding of the centrality of marketing to innovation & entrepreneurship;

2) Importance of fuzzy front end for breakthrough innovation; 3) What are the antecedents of breakthrough products and services?

Instructor: Prof. Ravindra Chitturi Tuesday 6:10 – 9:00 p.m. X85666 RAC2 E 301

MBA 402-D10 (CRN#14949). Managing Financial and Physical Resources (4)

An MBA core course designed to integrate financial and managerial concepts into operations decisions. Disciplines of accounting, finance and economics are combined to provide substantive foundations for discussing and analyzing data. Implications of analysis are applied to facilitate decision-making in other areas such as marketing, operations (manufacturing, logistics and engineering), human resources, information technology and general management. The major learning objectives will be applied through a series of “living” cases that are centered on analyzing historical financial performance, preparing a business plan, and valuing a business.

Prerequisites: MBA 401, GBUS 401 or equivalent.

Instructors: Prof. Sam Weaver Monday 6:10 – 9:30 p.m. X85282 SCW0 PA 410
Prof. Gary Smith, Adj. X85963 GAS205

MBA 405-D10 (CRN#15807). Managing People (4)

MBA 405, Managing People, is an MBA core course that focuses on how organizations create or sustain a competitive advantage through people. In this course, you will learn to apply principles of organizational behavior toward effective human resource management. Topics covered in this course include organization and job fit, employee attraction and selection, motivation principles, negotiation and conflict management, organizational culture, job design, and change management. This course also offers students the opportunity to learn about their leadership strengths and weaknesses including decision making, communication, and team building. The course material will be covered using lectures, class exercises and discussion, current topics, and case analyses. **Prereq: MBA 401.**

Instructor: Prof. Corinne Post Thursday 6:10 – 9:30 p.m. X85882 CGP208 E 301

MBA 406-D10 (CRN#14965) Integrative Experience (3)

The MBA Integrative Experience is a very important course in Lehigh’s MBA program. This course places an emphasis on strategic management as a key tool for creating and sustaining organizational competitive advantage. By taking the point of view of the general manager, we will view the organization from an overall perspective in the context of the firm’s internal and external environment. We will examine historical perspectives, contemporary theories, and practical applications all in the spirit of helping you develop a broad understanding of strategic management issues and solutions. This course will expose you to rigorous theoretical analysis while providing you with hands-on, simulated real world business experience.

As the capstone experience in the College of Business & Economics’ MBA program, this course requires that you integrate the concepts, knowledge, and skills acquired in previous functional courses and creatively apply them toward understanding and analyzing strategic management issues. The major objectives of this course include a focus on seven key areas. 1) Embrace a general management perspective – think strategically. 2) Develop a working knowledge of crucial strategic management concepts. 3) Hone basic skills for analyzing strategic issues. 4) Formulate and solve complex unstructured organizational problems. 5) Advance competence in a variety of primary and supporting organizational functions (the firm’s value chain), especially organizational processes outside your present experience, education, and interests. 6) Refine self-directed work team skills such as setting and implementing agendas, understanding other people’s perspectives, and dealing with people over whom you have no formal authority. 7) Sharpen written and verbal communication skills in order to more effectively inform and influence target audiences.

My goal is to engage you in the process of thinking and acting strategically through exposure to good theory, practice, and application. Thus, the course objectives will be achieved through an array of methods that include lecture, in-class discussions/assignments, case analyses, and a business simulation competition. The business simulation competition requires thoughtful and timely decisions in order for you to successfully start and operate a business firm in the computer hardware industry.

Prerequisites: MBA 401, MBA 402, MBA 403, MBA 404, MBA 405

Instructor: Prof. Jill Brown Tuesday 6:10–9:00 p.m. X83419 JGB207 PA 410

BIOLOGY

BIOS 328-D10 (CRN#14879). Immunology (3)

Distinction of “self” and “non-self” through humoral and cellular mechanisms. Antigens; biochemical structures, cellular mechanisms, genetic control and processing, phylogenetic distribution, diseased states.

Instructors Prof. Lynne Cassimeris M,W,F 10:10 – 11:00 a.m. X86275 LC07 PA 410
Prof. Robert Skibbens X86162 RVS3

BIOS 345-D10 (CRN#14880). Molecular Genetics (3)

The organization and replication of genetic material; mutagenesis; mechanisms of regulation; mechanisms of gene transmission involving prokaryotes and eukaryotes and their viruses; techniques for intervention into genetic organization and expression.

Instructor: Prof. Michael Kuchka T & R 9:20 – 10:35 a.m. X83687 MRK5 PA 410

BIOS 372-D10 (CRN#15703)/CHM 372-D10 (CRN#15707). Elements of Biochemistry II (3)

Dynamic aspects of biochemistry:enzyme reactions including energetics, kinetics and mechanisms, metabolism of carbohydrates, lipids, proteins and nucleic acids, photosynthesis, electron transport mechanisms, coupled reactions, phosphorylations, and the synthesis of biological macromolecules. Prerequisite: CHM/BIOS 371.

Instructor: Prof.Kathy Iovine M,W,F 9:10– 10:00 a.m. X86981 MKI3 PA 416

BIOS 407-D (CRN#Rosie will fill this in for you). Research in Biological Sciences (1-9)**

Laboratory investigations in one of the department’s research areas.

Instructor: Contact your research advisor for permission to register. [Please note your research advisor on registration form](#)

BIOS 421-D10 (CRN#15702). Molecular Cell Biology I (3)

Molecular aspects of cell structure, cell motility, intracellular transport; and cell cycle control. Students must have completed BIOS 345 and Bios 411. Students must attend ALL classes if registered. **Prerequisite: BIOS 345 and BIOS 411.**

Only regular status students will be enrolled, not associate status.

Instructor: Prof. Lynne Cassimeris Monday 1:10 – 4:00 p.m. X86275 LC07 E 301
Prof. Robert Skibbens X86162 RVS3

BIOS 427-D10 (CRN#15945). Techniques in Cell and Molecular Biology (3)

Times and projects to be arranged upon contacting Prof. Vassie Ware

Instructor: Prof. Vassie Ware X83690 VCW0

CHEMISTRY

CHM 372-D10 (CRN#15707)/BIOS 372-D10 (CRN#15703). Elements of Biochemistry II (3)

Dynamic aspects of biochemistry:enzyme reactions including energetics, kinetics and mechanisms, metabolism of carbohydrates, lipids, proteins and nucleic acids, photosynthesis, electron transport mechanisms, coupled reactions, phosphorylations, and the synthesis of biological macromolecules. Prerequisite: CHM/BIOS 371.

Instructor: Prof.Kathy Iovine M,W,F 9:10– 10:00 a.m. X86981 MKI3 PA 416

CHM 421-D (CRN#). Chemistry Research (1-6)**

Research in one of the following fields of chemistry: analytical, inorganic, organic, physical, polymer, biochemistry. **Please list your research advisor on your registration form.**

Contact: Dr. Rebecca Miller for information. No book required. X83676 RSM4

CHM 456-D10 (CRN#14890) Spectral Analysis (3)+CHM 458-D10 (CRN#14891). Problem Solving for Spectral Analysis (1)

Use of data from nuclear magnetic resonance, infrared, ultraviolet, and mass spectrometric techniques for the determination of structure of organic compounds. Emphasis on information from one- and two-dimensional proton and carbon NMR, and a mechanistic interpretation of data from mass spectrometry. **CHM 458:** Intensive study and practice in determining structure relying on data collected using modern techniques as described in the current literature. **This must be taken as a 4-credit course but must be registered separately as CHM 456 (3 credits) and CHM 458 (1 credit).**

Instructor: Prof. Natalie Foster T & R 4:15 – 5:30 p.m. X83646 NF00 PA 410

CHM 481-D10 (CRN#10343). Chemistry Seminar (1)

Student presentations on current research topics in the student’s discipline but not on subjects close to the thesis. A one-hour presentation. **Staff. No book required.**

CHM 490-D10 (CRN#10969). Chemistry Thesis (1-6)

Should be used if you are graduating and are finishing your research.

Please contact Dr. Rebecca Miller if you have any questions.

X83676

RSM4

CHM 499-D10 (CRN#10907). Chemistry Dissertation (1-15)

To be used by PhD students only.

Please contact Dr. Rebecca Miller if you have any questions.

X83676

RSM4

ENGINEERING**CHE 415-D10 (CRN#15762). Transport Processes (4)**

A combined study of the fundamentals of momentum transport, energy transport and mass transport and the analogies between them. Evaluation of transport coefficients for single and multicomponent systems. Analysis of transport phenomena through the equations of continuity, motion, and energy. Prerequisite: CHE 452 or equivalent.

Instructor: Prof. Mark Snyder

T & R

4:10 – 6:00 p.m.

X86834

MASN00

E 301

ChE 499-D10 (CRN#13855). Dissertation (1-15)

Please contact Prof. Kemal Tuzla for information

X84628

KT01

IE 332-D10 (CRN#16046). Product Quality (3)

Introduction to engineering methods for monitoring, control, and improvement of quality. Statistical models of quality measurements, statistical process control, acceptance sampling, and quality management principles.

Instructor: Prof. John Adams

M,W,F

11:10–12:00 noon

X84032

JWA0

PA 410

IE 362-D10 (CRN#15767)/MSE 362-D10 (CRN#15766). Logistics and Supply Chain Management (3)

Modeling and analysis of supply chain design, operations, and management. Analytical framework for logistics and supply chains, demand and supply planning, inventory control and warehouse management, transportation, logistics network design, supply chain coordination, and financial factors. Students complete case studies and a comprehensive final project. This course may be used as a substitute for IE 422.

Instructor: Prof. Mikell Groover

M & W

2:35 – 3:50 p.m.

X84030

MPG0

PA 410

IE 409-D10 (CRN#16060). Time Series Analysis (3)

Theory and applications of an approach to process modeling, analysis, prediction, and control based on an ordered sequence of observed data. Single or multiple time series are used to obtain scalar or vector difference/differential equations describing a variety of physical and economic systems.

Instructor: Prof. Frank Curtis

T & R

9:20 – 10:35 a.m.

X84879

FEC309

E 301

MSE 362-D10 (CRN#15766)/IE 362-D10 (CRN#15767). Logistics and Supply Chain Management (3)

Modeling and analysis of supply chain design, operations, and management. Analytical framework for logistics and supply chains, demand and supply planning, inventory control and warehouse management, transportation, logistics network design, supply chain coordination, and financial factors. Students complete case studies and a comprehensive final project.

Instructor: Prof. Mikell Groover

M & W

2:35 – 3:50 p.m.

X84030

MPG0

PA 410

MSE 431-D10 (CRN#14869)/GBUS 465-D10 (CRN#14870)/. Creating Breakthrough Innovations (3)

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Instructor: Prof. Ravindra Chitturi

Tuesday

6:10 – 9:00 p.m.

X85666

RAC2

E 301

MSE 446-D10 (CRN#15769). International Supply Chain Management (3)

Financial and managerial issues. Evaluation, selection, development and management of suppliers; business models, financial reporting strategies, earnings, quality, risk assessment and internal control, team based new product development. Selected readings, case studies, discussions, lectures, group projects, and presentations.

Instructor: Prof. Alan Feiertag

Monday

6:10 – 9:00 p.m.

ADF5

E 301

MSE 451-D10 (CRN#11847). Project (1-3)**Advisor: Prof. Keith Gardiner (instructor permission)****X85070****KG03****MSE 482-D10 (CRN#15771). Aspects of Sustainable Systems Design (3)**

Design of sustainable systems for manufacturing that fulfill human needs and generate wealth. Demographic, ecological, economic, environmental, ergonomic, health and global or local socio-political impacts on design and operation of future systems. Conservation of resources in the design, manufacture and use of products, processes, and implementation systems; life cycle engineering, reclamation, recycling, remanufacture. Research-based term paper.

Instructor: Prof. Keith Gardiner**Wednesday****4:10 – 7:00 p.m.****X85070****KG03****E 301****MSE 490-D10 (CRN#11855). Thesis (1-6)****Advisor: Prof. Keith Gardiner (instructor permission)****X85070****KG03****ME 309-D10 (CRN#15777)/MAT 309-D10 (CRN#15778) Composite Materials (3)**

Principles and technology of composite materials. Processing, properties, and structural applications of composites, with emphasis on fiber-reinforced polymers.

Instructors: Prof. J. L. Grenestedt**T & R****12:45 – 2:00 p.m.****X84129****JOG5****PA 410****Prof. Ray Pearson****X83857****RP02****ME 402-D10 (CRN#15780)/MAT 402-D10 (CRN#15984). Advanced Manufacturing Science (3)**

The course focuses on the fundamental science-base underlying manufacturing processes, and applying that science base to develop knowledge and tools suitable for industrial utilization. Selected manufacturing processes representing the general classes of material removal, material deformation, material phase change, material flow, and material joining are addressed. Students create computer-based process simulation tools independently as well as utilize leading commercial process simulation packages. Laboratory experiences are included throughout the course.

Instructor: Prof. John Coulter**T & R****10:45 – 12:00 noon****X86310****JC01****PA 410****ME 490-D10 (CRN#15406). Thesis (1-6)****M = Monday****T = Tuesday****W = Wednesday****R = Thursday****F = Friday****PL410 & PL 416 – Packard Lab****E301 – Mountain Top Campus****Phone: (610) 758+EXTENSION****10/15/09**