**Master of Business Administration and Engineering**

The basic 45 credit hour course sequence consists of:

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<th>Course Category</th>
<th>Credits</th>
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<tr>
<td>MBA core courses</td>
<td>18</td>
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<tr>
<td>Engineering core courses</td>
<td>12</td>
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<tr>
<td>Business electives</td>
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<tr>
<td>Engineering electives</td>
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<td>Free electives</td>
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<tr>
<td>Integrated project</td>
<td>1</td>
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<td><strong>Total Credits</strong></td>
<td><strong>45</strong></td>
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Students can choose an appropriate engineering curriculum from any of the following programs – chemical engineering, civil engineering, computer engineering, computer science, electrical engineering, environmental engineering, industrial and systems engineering, manufacturing systems engineering, materials science and engineering, mechanical engineering, or polymer science and engineering.

**MBA Core Courses**

- MBA 401  Introduction to the Organization and its Environment  2 Credits
- MBA 402  Managing Financial and Physical Resources  4 Credits
- MBA 403  Managing Information  4 Credits
- MBA 404  Managing Products and Services  4 Credits
- MBA 405  Managing People  4 Credits

**ENGINEERING CORE COURSES**

Each engineering program has its own set of core courses. Course choices are intended to be as flexible as possible, and are tailored to meet the needs of individual students. Further information can be obtained from the appropriate departmental graduate coordinator, or from the Office of Graduate Studies (610-758-6310) in the P.C. Rossin College of Engineering and Applied Science.

**ELECTIVES**

Engineering electives are chosen from courses in the appropriate RCEAS engineering program and the business electives are selected from course offerings in CBE. Electives can also be chosen from joint courses that are being developed by RCEAS & CBE.

**PROJECT**

A short interdisciplinary project is required of all students. Project topics, based on the specific interests of each student, will be developed by CBE and RCEAS faculty.

**ADMISSIONS**

Applications must be accepted by the MBA program and by the relevant department in the P.C. Rossin College of Engineering and Applied Science. When required by the engineering program, students must take the GRE. If this is not required, then the GMAT examination must be taken. Students will not be required to take both tests.

Further information can be obtained from:

- Office of Graduate Studies
- P.C. Rossin College of Engineering & Applied Science
  610-758-6310
  www.lehigh.edu/engineering
- or
- The Graduate Programs Office
  College of Business & Economics
  610-758-3418
  www.lehigh.edu/mba

**Courses**

**MBA 401 Introduction to the Organization and its Environment 2 Credits**

An MBA core course designed to provide a thorough understanding of business organizations by examining strategies middle and senior managers use to create and sustain organizational competitive advantage. The course examines the organization from an overall perspective within the context of the firm's internal and external environment. The second aspect of this course deals with the ability to communicate effectively in today's business and professional environment. Students will examine and practice the written and verbal communications strategies and skills that are essential to their success in business.

**MBA 402 Managing Financial and Physical Resources 4 Credits**

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 and GBUS 401 or BUAC )

**Can be taken Concurrently:** MBA 401

**MBA 403 Managing Information 4 Credits**

An MBA core course dealing with concepts and methods involved in the collection, organization and dissemination of information that helps managers make operational and strategic decisions. The course also deals with attributes of information and examines enterprise-wide impacts of local decisions. Revenue, cost, time and quality-based information are accorded equal emphasis, while students are exposed to alternative evaluation methods for decisions related to different parts of the value chain. Topics include: activity-based costing; activity-based management; transaction analysis; operational and strategic decisions such as outsourcing, design partnerships, etc; investment analysis for short lifecycle investments; evaluation of uncertainty, risk and ambiguity; metrics development; compensation policies; segment evaluation methods; target costing and functional analysis; quality function deployment; total cost of ownership; and transfer pricing. In addition, the course deals with: information technology enablers which allow firms to improve value delivered to customers; and evaluation and management of emerging forms of cooperation, such as joint ventures and project based strategic alliances.

**Prerequisites:** (ECO 401 or BUEC ) and (GBUS 401 or BUAC and MBA 401)

**Can be taken Concurrently:** MBA 401

**MBA 404 Managing Products and Services 4 Credits**

An MBA core course focusing on the management of products and services within a firm's value chain. The course addresses exceeding customer expectations, establishing total quality as the core foundation, developing a strong customer focus, creating value through supply chain management, developing new products for competitive advantage, matching aggregate supply with customer demand, and designing market channels and influencing customers.

**Prerequisites:** MBA 401

**Can be taken Concurrently:** MBA 401
MBA 405 Managing People 4 Credits
An MBA core course that examines how effective organizations are created, maintained, and improved. The course will focus on how good people are attracted to an organization and how to make them productive. Topics include: organizational design, job design, staffing, training and development, performance, teams, influence, diversity, change, ethical decision-making and current people issues facing today’s organizations.
Prerequisites: MBA 401
Can be taken Concurrently: MBA 401

MBA 406 Integrative Experience 3 Credits
An MBA course where students apply the body of knowledge acquired in MBA 401 through 405 through a simulation, case presentations and the cross core project. This course places an emphasis on strategic management and takes the point of view of the general manager to view the organization from an overall perspective in the context of the firm’s internal and external environment. In doing so, students examine historical perspectives, contemporary theories, and practical applications all in the spirit of helping them develop a broad understanding of strategic management issues and solutions. By combining high-level class discussions, case analyses, a computer simulation competition and the crosscore project this course exposes students to rigorous theoretical analysis while providing hands-on, simulated real world business experiences.
Prerequisites: (MBA 401 and MBA 402 and MBA 403 and MBA 404 and MBA 405)
Can be taken Concurrently: MBA 403