

- MEPM 511 Project Management Fundamentals (3:0:0)**
3 Semester Credit Hours - Pre-requisite(s): None; Co-requisite: MEPM 532
The fundamentals of project management including: overview and concepts of project management (principles, body of knowledge, strategies); planning successful projects (defining, specifying, delivery options, scheduling, budgeting); implementing (organizing the team, work assignments, team building, effective leadership); executing (performance measurement, maintaining the schedule, adjustments/mid-course corrections, record keeping, status reporting, communications, managing conflict, time management); and closeout (performance measurement, maintaining the schedule, adjustments/mid-course corrections, record keeping, status reporting, communications, managing conflict, time management).
- MEPM 512 Engineering Contracts and Procurement (3:0:0)**
3 Semester Credit Hours - Pre-requisite(s): None; Co-requisite: None
This course presents fundamental concepts and techniques for project procurement. Students are introduced to the PMBOK Guide four-step procurement process and expected to develop an in-depth understanding of project contracting, negotiation, and procurement execution.
- MEPM 513 Project Implementation and Performance (3:0:0)**
3 Semester Credit Hours - Pre-requisite(s): MEPM 511; Co-requisite: None
This course examines various topics related to project initiation and performance, Key performance indicators and criteria for measuring project success. The course includes using project performance software. Topics include: team building and management, organization structure, performance and success measures and earned-value technique. Other topics include: work breakdown structure, stakeholder management and project communication management.
- MEPM 514 Global Projects Management (3:0:0)**
3 Semester Credit Hours - Pre-requisite(s): MEPM 511; Co-requisite: None
This course provides an overview of the global project management process with specific emphasis on cross-cultural considerations, environmental factors, challenges, benefits & risks of global projects and leadership in global projects. The course also includes best practices that apply to global project management.
- MEPM 515 Project Scheduling (3:0:0)**
3 Semester Credit Hours - Pre-requisite(s): MEPM 511 P; Co-requisite: None
The course will prepare students to master project scheduling. Project scheduling methods are covered including: network construction, forward pass and backward pass calculations, activity slakes or floats calculations, critical path method (CPM), critical chain scheduling, Program Evaluation Review Technique (PERT), resource loading and resource leveling, Project crashing, and scheduling risk analysis. Students will have the opportunity to learn and use one of the project management software's for project scheduling.
- MEPM 516 Project Quality Management (3:0:0)**
3 Semester Credit Hours - Pre-requisite(s): MEPM 511; Co-requisite: None
This course covers the fundamentals of quality control and management, quality principles, quality control techniques, quality control tools (Check Sheets, Histograms, Pareto Diagram, Cause and Effect Diagram, Scatter Diagram, Flow Process Charts and Control Charts), Control Charts for Variables and for Attributes, Lot-by-Lot acceptance sampling, acceptance sampling system, quantitative techniques, quality decision-making techniques. Examples and case studies on project quality management are presented and discussed from a wide variety of engineering discipline.
- MEPM 519 Field Application Project (3:0:0)**
3 Semester Credit Hours - Pre-requisite(s): Final Semester; Co-requisite: None
The field application project is a capstone course in which the graduate student evidences the ability to apply the program outcomes to an applied project that integrates all basic elements of project management; planning, organizing, securing, managing, leading, and controlling resources to result in achievable specific goals project. The student will work with an instructor who serves as advisor to achieve project approval.
- MEPM 521 Project Cost Accounting and Finance (3:0:0)**
3 Semester Credit Hours - Pre-requisite(s): None; Co-requisite: None
This course covers the fundamentals of project cost accounting and finance. It reviews the fundamentals of accounting; examines cost accounting principles, applications, and the impact on profitability. It also examines the principles of project costing and covers the elements and introduces a framework for using an effective project cost system. Moreover, it introduces a framework for how projects are financed.

- MEPM 522 Financial Analysis and Decision Making (3:0:0)**
3 Semester Credit Hours - Pre-requisite(s): None; Co-requisite: None
This course covers some of the theory and practice of decision-making, as well as basic procedures for the application and interpretation of financial statement analysis. Topics covered in this context will include the concept of time value of money, project analysis and evaluation, cost of capital, stock valuation and capital budgeting.
- MEPM 523 Direct Research (3:0:0)**
3 Semester Credit Hours - Pre-requisite(s): Department Approval; Co-requisite: None
Under the guidance of an engineering faculty member the Directed Research Project provides the student with a meaningful capstone research experience. It requires that the student conduct a research topic or issue of significance to the field of project management. Direct research work should be ready for submission to a journal in the project management or closely related field.
- MEPM 531 Operation Research (3:0:0)**
3 Semester Credit Hours - Pre-requisite(s): None; Co-requisite: None
This course introduces the modeling techniques, theory and computation of linear programming. Topics include: The structure of linear programming, basic feasible solutions, simplex method, sensitivity analysis and linear programming duality. Linear programming modeling techniques for different applications: blending problem, inventory problem, minimum cost network flow problem, transportation problem, capital budgeting and fixed charge problems. Basic integer programming, dynamic programming and queuing theory methodologies and techniques will be introduced.
- MEPM 532 Engineering Management (3:0:0)**
3 Semester Credit Hours - Pre-requisite(s): None; Co-requisite: None
The fundamentals of engineering management including: overview and concepts of engineering management (Introduction to engineering management, Management cycle includes (Planning, organizing, Leading and controlling. Different aspects of engineering managements will be introduced; like managing research and development, managing engineering design and managing production activities and operations. Market management and service activities for engineers will be clarified as well. Engineers as managers and Engineers code of Ethics concepts and elements will be clarified. Finally, the globalization concept and the new challenges for engineering managers in the future will be discussed.
- MEPM 533 Information Systems for Project Management (3:0:0)**
3 Semester Credit Hours - Pre-requisite(s): MEPM 511; Co-requisite: None
This course will assist the student in understanding the challenges, opportunities and risks involved in information technology management. It introduces the management information systems foundations; current trends; MIS technology fundamentals; its applications to business functions and management practice and in an ethical manner. The impact of information technology on project management will be stressed since it affects the planning process. This course will also cover various system applications for specific project and business functions and their importance to today's manager.
- MEPM 541 Organization Behavior and Project Team Management (3:0:0)**
3 Semester Credit Hours - Pre-requisite(s): None; Co-requisite: None
This course deals with human behavior as individual and as groups in organizations. Individual-level characteristics such as personality, attitudes and values, perceptions and judgment, motivations, career development and ethics are emphasized. Topics include group formation, development, structure, leadership, diversity, and dynamics, as well as the processes of communication, decision making, power, and conflict. Class sessions and assignments are intended to help participants acquire skills and analytic concepts to improve organizational relationships and project team management effectiveness.
- MEPM 542 Supply Chain Management for Project Managers (3:0:0)**
3 Semester Credit Hours - Pre-requisite(s): None; Co-requisite: None
This course focuses on management and improvement of supply chain processes and performance. It will be valuable for project managers who would like to pursue a career in consulting or take a position in operations, marketing or finance functions in a manufacturing or distribution firm. We explore important supply chain metrics, primary tradeoffs in making supply chain decisions, and basic tools for effective and efficient supply chain management, production planning and inventory control, order fulfillment and supply chain coordination.
- MEPM 543 Risk Management for Project Managers (3:0:0)**
3 Semester Credit Hours - Pre-requisite(s): MEPM 511; Co-requisite: None
This course addresses fundamental issues, principles, and theory of project risk management and planning. It covers the quantitative and qualitative approaches to identifying, analyzing, assessing, and managing risks inherent to engineering projects. Other topics include risk response strategies and planning.