MASTER OF ENGINEERING MANAGEMENT COURSES (by Portable Media)

All three-credit courses may be completed in any sequence. These courses do not have prerequisites for enrollment other than the program prerequisite of basic calculus, differential equations and probability and statistics which is satisfied by completion of BRES (Bettis Reactor Engineering School) or ONPS/Prototype.

Available portable media-delivered MEM courses include these courses that are required for all MEM graduates:

- **ENMA 600: Cost Estimating and Financial Analysis** (3 credits). Introduction to the monetary aspects of engineering projects, including accounting principles; financial reports and analysis; capital budgeting; cost estimation and control, inventory management; depreciation; investment decisions.

- **ENMA 603: Operations Research** (3 credits). Introduction to optimization methods and deterministic models for decision making, linear, integer and non-linear programming; transportation, assignment, and inventory models; network techniques; sensitivity analysis.

- **ENMA 604: Project Management** (3 credits). Design, evaluation, control, and organization of technical projects; scheduling, budgeting, planning, and monitoring practices; software tools; project information systems; proposal preparation; strategic issues; marketing of technology.

- **ENMA 613: Logistics and Supply Chain Management** (3 credits). Management systems for distribution, materials handling, inventory control, transportation planning and facilities location and analysis. Special emphasis on logistic information systems and the development of logistics strategy. Includes case studies.


- **ENMA 715: Systems Analysis** (3 credits). Provides an understanding of the interdisciplinary aspects of the systems development, operation, and support. Focuses on application of scientific and engineering efforts to transform an operational need into a defined system configuration through the interactive process of design, test and evaluation.

Or

- **ENMA 724: Risk Analysis** (3 credits). Principles and applications of risk analysis in the context of systems engineering and management.

- **ENMA 743: Reliability and Maintainability** (3 credits). Introduction to the theory and practice of reliability engineering, maintainability and availability from an interdisciplinary perspective, emphasizing concepts, models and practical applications.

- **ENMA 771: Risk & Vulnerability, Management of Complex and Interdependent Systems** (3 credits). Systematic approach to basic principles of design, economics and management of critical infrastructure systems, including issues of risk, vulnerability and risk governance.

For **pre-approved MEM candidates** who are not graduates of BRES or NPS-O/Prototype, these additional courses are available asynchronously to complete the 31 required credit hours for graduation.

- **ENMA 601: Analysis of Organizational Systems** (3 credits). Provides a foundation in the fundamental theories and practices of human personality and behavior, interpersonal and organizational dynamics and leadership.

- **ENMA 724: Risk Analysis** (3 credits). Principles and applications of risk analysis in the context of systems engineering and management.

- **ENMA 743: Reliability and Maintainability** (3 credits). Introduction to the theory and practice of reliability engineering, maintainability and availability from an interdisciplinary perspective, emphasizing concepts, models and practical applications.

- **ENMA 771: Risk & Vulnerability, Management of Complex and Interdependent Systems** (3 credits). Systematic approach to basic principles of design, economics and management of critical infrastructure systems, including issues of risk, vulnerability and risk governance.

For questions on these courses and specifics for individual MEM student degree plans, contact Programs Manager and Advisor Dr. Kim Bullington, kbulling@odu.edu.

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