

Facilities Engineering Management Diploma Program

NC STATE UNIVERSITY

Office of Professional Development

go.ncsu.edu/fem

"I believe that the knowledge gained during these courses will quickly pay for the cost of attending by saving maintenance costs as well as energy savings as they are applied to our own facilities. The knowledge gained in this program makes me more enthusiastic about applying the principles to my own situation."

— Bryan Wentz,
Union County Department of Public Works,
Monroe, NC

Approved Course Provider for the Federal Buildings Personnel Training Act



To bring this program to your employees,
contact Customized Training and Development at

919.513.5080 or andrew_billingsley@ncsu.edu

What Makes This Program Unique

NC State University established this non-degree diploma series to give you, the facility management professional, the knowledge and skills you need to help your facility reach its goals. You will receive your Facilities Engineering Management (FEM) diploma upon the successful completion of three one-week courses, totaling 96 contact hours of maintenance, electrical, mechanical, environmental, health and safety,

construction, energy conservation and management instruction.

The weekly sessions do not have to be taken in sequence, but the requirements must be completed within three years.

Upon completion of the requirements, you will be expected to make a final presentation (15 minutes) on your specific experiences in the field of facilities management. You will then be awarded a non-credit diploma from the Office of Professional Development at NC State University.

Who Should Attend

The FEM Diploma Program is intended for managers of maintenance, maintenance supervisors, maintenance technicians with operations responsibilities, plant and facility engineers, maintenance planners and anyone who makes maintenance decisions regarding operations, repair or replacement.

Earn 3.2 CEUs / 32 PDHs

Facilities Engineering Management (FEM) 1

Areas of Concentration

- Approaches to facility management
- How to achieve quality in plant commissioning and operation
- Facility process energy efficiency and sustainability
- Chillers and cooling systems
- Electrical systems

Choose from These Topics*

- Plant renovation: contract terms and conditions
- Alternate dispute resolution: ways to stay out of court
- HVAC operation and efficiency
- Hydronic systems
- Power-quality solutions
- Chillers and cooling towers
- Process-energy analysis
- T&B building commissioning

* The content of sessions may be occasionally adjusted in order to meet industry education and needs.

Facilities Engineering Management (FEM) 2

Areas of Concentration

- Project management
- Environmental, safety and health issues
- Heating, ventilation and air conditioning controls
- Improving the building envelope for the environment
- Changes in electrical power delivery

Choose from These Topics*

- Scheduling with the critical path method (CPM)
- OSHA general industry discussion
- Pump efficiency and reliability
- Building envelope and the environment
- DDC control strategies and specifications
- Compressed air systems and management
- The impact of distributed generation

Facilities Engineering Management (FEM) 3

Areas of Concentration

- Maintenance management techniques
- Improving maintenance functions
- Engineering issues in facilities management
- A guide to building automation systems
- Trends in renewable energy generation
- HVAC maintenance
- Building commissioning

Choose from These Topics*

- Working with contractors: design and build contracts
- OSHA 10-hour construction certification
- Fundamentals of commercial and industrial roofing
- Guide to building automation
- Energy-efficient motors and VFDs
- HVAC maintenance techniques for facilities managers
- Trends in renewable generation
- The existing building commissioning process

Program Advisors

Rick Cook, Austin, Dillon,
Cook Engineering, Hanahan, SC

Steve Dixon, Energy Manager,
Highwoods Properties, Raleigh, NC

Jamie Edmondson, James M. Pleasants Co. Inc.,
Greensboro, NC

Roger Lawrence, P.E., CEM, LFIEEE,
Independent Consultant and Sole Proprietor,
Raleigh, NC

Paul McCain, P.E., McCain Special Project Services,
Raleigh, NC

Bill McMullen, Vice President/
Mid-Atlantic Regional Manager, EMC Engineers
Inc., Raleigh, NC

David Miller, CEM, BEP,
Energy Manager, City of Charlotte,
Charlotte, NC

James J. Parker, P.E., CEM, CMVP, Staff
Application Engineer, Schneider Electric Energy
Solutions, Raleigh, NC

John Rees, Retired-Energy Extension Specialist,
Mechanical and Aerospace Engineering, NC State
University, Raleigh, NC

Rob Shaw, Energy Outsource Group

Bill Turpish, P.E., PEM, CEM
W.J. Turpish and Associates, Shelby, NC