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- **Learn Facilities Management From a Team of Experienced Professionals**
- **Only Program of Its Kind in the United States**
- **Can Be Completed in One Year**

**New students enroll now!**

Take these three sessions in any sequence you like.

**FEM II: June 6–10, 2011**

**FEM III: September 12–16, 2011**

**FEM I: December 5–9, 2011**

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# THE PROFESSIONAL *DIPLOMA* PROGRAM **Facilities Engineering Management**

Chosen by industry, commerce, local and federal government employees to gain hands-on, practical, successful facilities management education taught by experienced facilities professionals.



**Improve Energy Efficiency**  
**Reduce Maintenance and Operational Costs**



## **What Past Participants Have to Say About This Program**

“The training received in the FEM courses would take years to receive with on-job training. Ideas and techniques from the FEM classes have already proved to be useful and cost effective.”

— Jason Neuman, Facilities Administrator,  
Bonset America,  
Brown Summit, NC

“The FEM course is a fantastic program with knowledgeable instructors. This environment fosters an atmosphere of learning and real world discussions which can empower all participants.”

— Joshua Kennedy, Management Analyst,  
NAVFAC Mid-Atlantic, Norfolk, VA

“I love the fact that every time I attend a class, I learn something new or learn about changes in our field that I would never learn without the class.”

— Scott Capouch, Engineer,  
NIEHS, RTP, NC

“Facility Engineering Management is all inclusive and this program gives me specific details that save me time and money in my plant’s current and future projects as well as management of our utilities.”

— Dave Merkel,  
Facilities Manager,  
Sara Lee Bakery, Tarboro, NC

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Call 919.515.2261 or Fax 919.515.7614

# Facilities Engineering Management

## NEW STUDENTS ENROLL NOW!

Take the three sessions in any sequence you like.



Recent Facilities Engineering Management Diploma students in a class photo with Program Director Roger Lawrence (front row, far right).

## About The Diploma Program

The NC State University Facilities Engineering Management Diploma will provide you with an excellent means of credentialing and will demonstrate that you have been exposed to and have gained a grasp of essential skills and knowledge. Earning the diploma represents solid evidence of your successful completion of the course requirements and illustrates your dedication to becoming more knowledgeable in your field and valuable to your organization.

## Why You Should Attend

Today's facilities are complex, dynamic, and high tech, requiring them to be maintained in a manner that maximizes their full potential while minimizing operational costs. Well-trained, professional facility maintenance management personnel are needed to accomplish this.

## Attend and You'll

- Set yourself above your peers, leading to advancements in position and earnings.
- Earn a diploma from a distinguished university.
- Join a select group of personnel in the facilities engineering field.
- Prove your knowledge and competence in your field.
- Enhance your knowledge of the facilities engineering management field.
- Gain exposure to current and emerging relevant aspects of facilities engineering.
- Provide the credential to your employer or prospective employer demonstrating that you have the in-depth knowledge to be a manager in a facility's engineering department.

The weekly sessions do not have to be taken in sequence, but you must complete all the requirements within a three-year period.

## What Makes This Program Unique

North Carolina State University has established this non-credit diploma series to give you, the facility maintenance management professional, the knowledge and skills you need to help your facility reach its goals. You'll receive the Facilities Engineering Management Diploma upon the successful completion of three one-week courses totaling 120 contact hours of maintenance, electrical, mechanical, environmental, health and safety, construction, energy conservation and management instruction.

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

**REGISTER TODAY! On-line at [ContinuingEducation.ncsu.edu](http://ContinuingEducation.ncsu.edu), Call 919.515.2261, or Fax your registration form to 919.515.7614**

## Facilities Engineering Management (FEM) II

June 6–10, 2011

### Areas of Concentration

- Project Management
- Heating, Ventilation, and Air Conditioning
- Environmental, Safety, and Health Issues
- Controls

### Attend and You Will Learn\*

- Scheduling with the Critical Path Method (CPM)
- Effective Planning and Scheduling
- Energy and Environmental Regulations
- HVAC Control Strategies
- Distributed Generation
- OSHA General Industry 10-Hour Certification
- Boilers and Steam Systems
- DDC Controls

## Facilities Engineering Management (FEM) III

September 12–16, 2011

### Areas of Concentration

- Maintenance Management Techniques
- Improving Maintenance Functions
- Engineering Issues in Facilities Management

### Attend and You Will Learn\*

- Working with Contractors and Design/Build Contracts
- OSHA 10-Hour Construction Certification
- Fundamentals of Commercial and Industrial Roofing
- Electrical Schematics and Diagrams
- Pumping Systems Design
- Energy-Efficient Motors and Drives
- Management Skills for Facilities Managers

## Facilities Engineering Management (FEM) I

December 5–9, 2011

### Areas of Concentration

- Facility Management Issues
- Energy Efficiencies
- Quality in Plant Engineering
- Construction and Building Systems
- Facility Energy Efficiency and Sustainability

### Attend and You Will Learn\*

- HVAC Operations and Efficiencies
- Hydronic Systems
- Power Quality Solutions
- Contract Terms and Conditions
- Alternate Dispute Resolution
- Chillers and Cooling Towers
- Process Energy Analysis
- Building Envelope Analysis
- T&B Building Commissioning

\* **NOTE:** The content of sessions may be occasionally adjusted in order to meet interests and needs.

**Sessions do not have to be taken in a particular sequence, however the FEM Diploma program must be completed within three years from the date of the first class.**

## 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

**Walter Johnston**, PE, CPE, Director  
Emeritus of the FEM Diploma Program,  
1998 International Energy Engineer of  
the Year, and past President of the  
Association of Energy Engineers

**Roger Lawrence**, PE, CEM, PEM, FIEEE,  
Independent Consultant and Sole Proprietor

**Paul McCain**, 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**, PE, CEM, CMVP, Staff  
Application Engineer, Schneider Electric  
Energy Solutions, Raleigh, NC

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

**Rob Shaw**, National Gas Distributors LLC

**Bill Turpish**, PE, PEM, CEM  
W.J. Turpish and Associates, Shelby, NC

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## Depending on your Internet service provider and/or your personal e-mail settings...

e-mails from NC State University in regard to this registration process may be considered unsolicited and not be delivered to your in-box. If you do not receive an e-mail confirmation from NC State University, please check your "spam" file if you have one, or you may contact us at **919.515.2261** with any questions about your registration status.

For more information, you can also visit our website at **ContinuingEducation.ncsu.edu** or call **919.515.2261**.

## Schedule and Location

Check-in is held from 8:00 to 8:30 a.m. with class from 8:30 a.m. to 5:00 p.m. Monday through Thursday, and from 8:00 a.m. to noon on Friday.

All sessions take place in the McKimmon Conference & Training Center, conveniently located on the NC State University campus at the corner of Western Boulevard and Gorman Street in Raleigh, NC. Driving to the McKimmon Center is easy and public parking is plentiful.

Following your enrollment, you will receive a confirmation letter by e-mail with detailed instructions, a receipt or invoice, and a map of the Raleigh area.

## Where to Stay

Lodging and evening meals are not included in your registration fee.

Sleeping accommodations are available at several hotels convenient to the McKimmon Center, but please note that these hotels are not within walking distance.

For lodging information, please visit our website at **ContinuingEducation.ncsu.edu** or call **919.515.2261**.

## Credits You Can Earn

Individuals satisfactorily completing each course will be eligible for 3.5 CEUs and 35 PDHs. For more information, please visit our website at:

**ContinuingEducation.ncsu.edu**  
or call **919.515.2261**.

## Your Guarantee of Satisfaction

We realize how valuable your time and money are and that you and your organization expect to get a return on your investment. We promise that you will be completely satisfied with your learning experience or we will refund your entire registration fee.

## Your registration fee includes...

- ✓ Tuition for all classes, lectures, and demonstrations
- ✓ A comprehensive reference notebook you can use every day on the job
- ✓ A tote bag to carry your class materials
- ✓ 4 networking luncheons and refreshment breaks
- ✓ A Certificate of Completion
- ✓ 3.5 CEUs/35 PDHs

## BRING THESE TOPICS ON-SITE

Take advantage of the opportunity to have topics from these courses presented at the location of your choice.

### Benefits Include

- Custom-tailored instruction
- Convenience
- Substantial savings over public prices if you train 10 or more of your people.

Contact **Andy Billingsley** at **919.513.5080** or **Andrew\_Billingsley@ncsu.edu** for more information.



Ritchie Greene (left), Facilities/Purchasing Manager with ASSA ABLOY, receives his diploma from Program Director Roger Lawrence (right).

"This is the best program I've been to in my 31 years with the company. The instructors are great, and there is no way you will not come away with more knowledge than going in...My job performance has increased from taking the Facilities Engineering Management courses because of all the knowledge that I have received from each program."

—Ritchie Greene,  
Facilities/Purchasing Manager,  
ASSA ABLOY, Monroe, NC

## If you are a person with a disability ...

and desire any assistive devices, services or other accommodations to participate in these courses, please call **919.515.2261** during business hours (8 a.m. to 5 p.m. Eastern) or e-mail **ContinuingEducation@ncsu.edu** to discuss accommodations at least two weeks in advance.

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## REGISTRATION INFORMATION

### Facilities Engineering Management (FEM) Diploma

McKimmon Conference & Training Center • NC State University • Raleigh, NC

#### Check course(s) you will be attending:

- |                                  |                       |                  |                     |
|----------------------------------|-----------------------|------------------|---------------------|
| <input type="checkbox"/> FEM II  | June 6–10, 2011       | \$1,995/\$1,795* | EOFEMD11/E02FEM611  |
| <input type="checkbox"/> FEM III | September 12–16, 2011 | \$1,995/\$1,795* | EOFEMD12/E03FEM912  |
| <input type="checkbox"/> FEM I   | December 5–9, 2011    | \$1,995/\$1,795* | EOFEMD12/E01FEM1212 |

**\* NEW TEAM DISCOUNT!** \$1,795 for each additional registration from the same organization and for government employees. ID may be required if you are registering as a government employee.

**SAVE \$\$\$!! Pre-register and pay for all three sessions for just \$1,695 per session!**

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Enter this code even if label is addressed to someone else. *Thank You!*

\_\_\_\_\_  
First Name Middle Initial Last Name Date of Birth\*

Title \_\_\_\_\_

Badge Name \_\_\_\_\_

Organization \_\_\_\_\_

Work Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Telephone \_\_\_\_\_ Fax \_\_\_\_\_

E-mail \_\_\_\_\_

Name, Phone Number & E-mail of Your Approving Manager \_\_\_\_\_

*\* In lieu of SSN, your date of birth is required as a personal identifier for internal record keeping by this university.*

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#### Fax...

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#### Mail...

Your registration to:  
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**North Carolina State University**  
**Box 7401 • Raleigh, NC 27695**



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## Method of Payment

Payer: ☐ Company ☐ Self

*Payment must accompany registration and must be received by the first day of the program.*

*The easiest way to guarantee your place is to pay with a credit card.*

Please charge my credit card

☐ American Express

☐ VISA

☐ MasterCard

☐ Diners Club

Corporate Card ☐ Yes ☐ No

Account # (Please list all numbers)

Exp. Date \_\_\_\_\_

Security Code \_\_\_\_\_

Amount Charged \$ \_\_\_\_\_

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Cardholder's Signature (required) (Seal)

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(Do not fax)

**(Payable to NC State University)**

*Write the name(s) of the participant(s) on face of the check(s).*

☐ If you wish to pay by purchase order, please submit your purchase order and this registration form by mail or fax them to **919.515.7614**.

☐ IDT (NC State University employees only)

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## OTHER DIPLOMA PROGRAMS ALSO AVAILABLE TO YOU!

### Energy Management (EM) Diploma

#### Why This Program Is Unique

The **Energy Management Diploma** will provide you with an excellent means of credentialing and will demonstrate that you have been exposed to and have gained a grasp of essential skills and knowledge. While not a degree or a specific certification of your qualifications, earning the diploma represents solid evidence of your successful completion of the course requirements and illustrates your dedication to becoming more knowledgeable of your field and valuable to your organization.

- Three one-week programs leading to a diploma in energy management.
- Learn energy management from a team of professionals.
- Only program of its kind in the United States.
- Can be completed in less than one year.

#### Why You Should Attend

- Enhance your knowledge of the energy management field.
- Prove your knowledge and competence in your field.
- Set yourself above your peers leading to advancements in position and earnings.
- Earn a diploma from a distinguished university.

- Join a select group of personnel in the energy field.
- Gain exposure to current and emerging relevant aspects of energy management.
- Provide the credential to your employer or prospective employer that you have the in-depth knowledge to be a manager in energy management.

#### Upcoming Sessions:

- EM II: Improving Equipment Efficiencies** June 20–24, 2011
- EM III: Industrial and Commercial Energy, Process and Building Analysis** November 7–11, 2011
- EM I: Managing Energy for Greater Profitability** January 9–13, 2012

### Advanced Maintenance & Reliability Management (MRM) Diploma

#### Why This Program Is Unique

NC State University, in partnership with Marshall Institute, offers you a three-week diploma program that will develop your maintenance and reliability knowledge and sharpen your leadership skills for today's increasingly competitive global marketplace. This program will expose you to real-world examples and will provide you with practical knowledge and skills applicable in your plant or facility.

- Taught in a university environment dedicated to the continuing development of working professionals.
- Delivered by experienced maintenance and reliability professionals from Marshall Institute.
- Flexible course designed for the working professional.

#### Why You Should Attend

Today's modern process and manufacturing industries are complex and asset intensive, requiring them to be maintained in a manner that maximizes uptime while minimizing operational costs. In addition, plants and facilities must be maintained so

that process safety and asset integrity are not compromised. Well trained maintenance and reliability professionals are needed to accomplish these objectives.

#### Upcoming Sessions:

- MRM I: Strategic Leadership, Planning and Control** April 4–8, 2011
- MRM II: Work Flow and Materials Management** September 19–23, 2011
- MRM III: Risk and Reliability Management** January 23–27, 2012

## MARK YOUR CALENDAR!

■ Microsoft Project Level 1	March 9, 2011	■ AutoCAD 3D	April 7–8, 2011
■ Autodesk Revit	March 10–11, 2011	■ Managing Capital Projects	April 18–20, 2011
■ SharePoint for Project Management	March 15–16, 2011	■ Management Skills for Technical Professionals	April 19–21, 2011
■ Managing Disaster Planning, Response and Recovery Projects	March 21–23, 2011	■ Mastering Project Management	May 2–4, 2011
■ The 30th Annual State Construction Conference	March 24, 2011	■ Excel Tips & Tricks	May 4, 2011
■ AutoCAD Level 3	March 24–25, 2011	■ Effective Written Communication: Writing for Results	May 9–11, 2011
■ Microsoft Project Level 1	April 5, 2011	■ Fundamentals of Accounting & Finance for Non-Financial Professionals	May 24–26, 2011
■ Speaking the Language of Leadership: How to Communicate with Power and Persuasion	April 5–7, 2011	■ Project Management: Tools, Principles, and Practices	June 6–8, 2011
■ Team-Based Project Management	April 5–7, 2011	■ Whole-Brain Project Management	June 13–15, 2011
■ Microsoft Project Level 2	April 6, 2011		

**For more information or to register for any of these programs, visit our website at [ContinuingEducation.ncsu.edu](http://ContinuingEducation.ncsu.edu), e-mail [ContinuingEducation@ncsu.edu](mailto:ContinuingEducation@ncsu.edu) or call 919.515.2261**

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- |                                 |                     |                  |                   |
|---------------------------------|---------------------|------------------|-------------------|
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| <input type="checkbox"/> EM III | November 7–11, 2011 | \$1,995/\$1,795* | EOEMD12/EOEMNOV12 |
| <input type="checkbox"/> EM I   | January 9–13, 2012  | \$1,995/\$1,795* | EOEMD12/EOEMJAN12 |

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| <input type="checkbox"/> MRM II  | September 19–23, 2011 | \$1,995/\$1,795* | MMRMDF12/MRM2F12 |
| <input type="checkbox"/> MRM III | January 23–27, 2012   | \$1,995/\$1,795* | MMRMDS12/MRM3S12 |

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Title \_\_\_\_\_

Badge Name \_\_\_\_\_

Organization \_\_\_\_\_

Work Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Telephone \_\_\_\_\_ Fax \_\_\_\_\_

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Name, Phone Number & E-mail of Your Approving Manager \_\_\_\_\_

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☐ Diners Club

Corporate Card ☐ Yes ☐ No

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"A must-attend for all facilities  
engineers in the field."

—Juan Jimenez, NAVFAC SE

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- ✓ Learn Facilities Management From a  
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- ✓ Can Be Completed in One Year

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### ALSO INSIDE!

Information about the  
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