

ENERGY MANAGEMENT

BACHELOR OF APPLIED SCIENCE (BAS) DEGREE OFFERED ONLINE ONLY

CONTACT PERSON: Tammy Heupel • National Energy Center of Excellence Office 227-08 • (701) 224-2484 • Tammy.Heupel@bsc.nodak.edu

The Bachelor of Applied Science (BAS) in Energy Management is designed for individuals interested in supervisory and management positions in the energy industry. The BAS builds on energy related foundations developed in previously completed energy education programs and includes general education classes, core management courses and Energy Management courses. This program is offered entirely online, allowing students to access classes around their work schedule.

To enroll in the Bachelor of Applied Science in energy management, a student must have completed an Associate in Applied Science Degree, Certificate, or Diploma in an accredited and approved program in an energy related field.

BSC offers the BAS in Energy Management to meet the needs and demands of the energy industry for qualified supervisors and managers, and to provide opportunities for energy workers to prepare for these positions of leadership. This program was developed in response to the nation's ever-increasing demand for energy and the growing need for highly trained energy workers who seek advancement in their careers. The energy industry is encouraging continued education for the diploma, certificate, or AAS degree graduates to fill the many positions soon to be vacated by a large number of retirees.

This program will enable students to acquire the management skills and knowledge to develop fulfilling careers and to maximize their potential for attaining advanced-level, leadership positions in the energy industry.

CURRICULUM FOR BAS IN ENERGY MANAGEMENT

Completion of AAS, Certificate, or Diploma in an energy field.....	55-60 Credits
General Education.....	21-36 Credits
Core Management Courses.....	21 Credits
Energy Management Courses.....	24 Credits
Total Semester Hours.....	126-141 Credits

(A cumulative GPA of 2.25 or higher is required for graduation.
30 credits must be upper division* (300/400 Level) credits.)

GENERAL EDUCATION (36 CREDITS)

bismarckstate.edu/catalog/matrix/GeneralEdMatrix.pdf

Communications (9 Credits)

English 110
English 120 or 125
Comm 110 Speech

Arts and Humanities (9 Credits)

Choose 9 credits from Arts and Humanities

Social and Behavioral Science (9 Credits)

*Econ 201 Microeconomics
*Econ 202 Macroeconomics
Choose a Social and Behavioral Sciences class

Math, Science and Technology (9 Credits)

*Math 210
Science (lab not required)
Choose a Math, Science & Technology class
*Denotes required program general education class

*CORE MANAGEMENT COURSES

CREDITS

ACCT 200 Elements of Accounting I.....	3
ACCT 201 Elements of Accounting II.....	3
BADM 274 Project Management.....	3
BADM 202 (BSC) Principles of Management, OR BADM 301 (MiSU) Fundamentals of Management OR BADM 336 (DSU) Management and Leadership.....	3
BADM 282 (BSC) Human Resource Management, OR BADM 303 (MiSU) Human Resource Management OR BADM 346 (DSU) Human Resource Management.....	3
BADM 281 (BSC) Organizational Behavior, OR BADM 356 (DSU) Organizational Behavior OR BADM 436 (MiSU) Organizational Behavior Principles and Practices.....	3
COMM 317 (DSU) Organizational Communications.....	3
Total Semester Hours.....	21

*ENERGY MANAGEMENT COURSES	CREDITS
ENRG 302 Ethical Issues in the Energy Industry.....	3
ENRG 310 Energy Production and the Environment	3
ENRG 320 Workforce Safety.....	3
ENRG 330 Government Regulations in the Energy Industry.....	3
ENRG 404 New and Emerging Energy Technologies	3
ENRG 412 Energy Economics and Finance	3
ENRG 420 Energy Markets and Structures	3
ENRG 435 Managing Energy Facilities	3
Total Semester Hours.....	24

*Check BSC's Web site at bismarckstate.edu/energy for the most up-to-date course offerings and schedules.

ENERGY MANAGEMENT (ENRG)

- ENRG 302 Ethical Issues in the Energy Industry 3 credits**
 Since its inception, the energy industry has faced ethical challenges. From the Edison-Westinghouse feuds to the events leading up to PUHCA in 1935, and from Enron to the failed deregulation attempts in California; there have been numerous instances of ethical dilemmas and governmental response to these issues. This class will look at these issues, what safeguards have been put in place to prevent recurrence, and conclude with several case studies to challenge the students.
- ENRG 310 Energy Production and he Environment 3 credits**
 This class will provide an in-depth look at current environmental issues facing the energy industry as a whole. Included will be a detailed look at the greatest environmental challenge the industry currently faces, climate change
- ENRG 320 Fundamentals of Workforce Safety 3 credits**
 This course presents advanced safety policies and regulations that impact occupational safety and health issues in the workplace. Students will study processes and procedures that protect both the workers and the organizations. Written safety programs, training, workers compensation, the value of safety, and means to build a safety culture in an organization will be studied in the course.
- ENRG 330 Government Regulations in the Energy Industry 3 credits**
 Students will study the legal and regulatory framework in which energy is developed and the business structure of energy producers. Students will learn about the evolution of energy policy in the United States, including the laws and regulations related to particular types of energy sources. Finally, students will study the policy and regulatory structure promoting the development of alternative energy sources and other green initiatives.
- ENRG 404 New and Emerging Energy Technologies 3 credits**
 Students in this course will explore the latest in energy technologies and how they are designed to increase efficiencies, protect the environment and streamline processes. Students will discover how some of the “new technologies” have been around for quite some time and the reasons they are capturing new attention.
- ENRG 412 Energy Economics and Finance 3 credits**
 Students will study the global economics and financial issues that impact the energy industry. They will learn how these impacts affect what strategies energy companies use to secure reliable sources of operating funds and capital investment to improve existing facilities or develop new ones, including but not limited to generating plants, transmission and distribution systems, coal, petroleum, etc. Students will explore how fluctuations in regional, national, and world energy markets directly impact day to day operations.
- ENRG 420 Energy Markets and Structures 3 credits**
 This course provides a comprehensive overview of energy markets, pricing, structures, and economics specifically relating to the energy industry. Students will study the structure of various energy markets and learn to quantify the influence of market structure on energy prices. The course will cover new and emerging markets and learn how modern energy markets are being transformed from regulated monopolies into market-driven suppliers of competitively priced energy and related services.
- ENRG 435 Managing Energy Facilities 3 credits**
 This course provides a comprehensive overview of facilities management specifically related to the energy industry. Students will study the theories and principles associated with managing large energy production facilities. Major areas analyzed are facilities operations, maintenance, staff management, budgeting, scheduling, managing capital projects, and relationships with contractors and vendors. Students explore current issues related to facilities management and its relationship to various organizational units including human resources, operations, occupational health and safety, labor relations and unions, finance, purchasing and executive management.