



# MEAD

## ENERGY ACADEMY



According to the U.S. Department of Labor's Bureau of Labor Statistics, in 2014 there were 1,698,830 direct jobs in the Energy Industry.

This is an exciting and major growth industry. For example, in 2015, employers surveyed expect to see total employment in the solar industry increase by 20.9%.

# Energy Academy

## About the MEA Program

The Mead Energy Academy (MEA) is a unique program that offers all interested students a secondary public education devoted to the principles of energy. The goal of this program is to equip future leaders to be innovators in an increasingly diverse energy industry. The MEA is open to all students whether their future plans include a two or four-year college degree, or direct entry into the workforce.

In the next five years, as much as 36% of the skilled energy workforce will need to be replaced due to retirement. By 2023, this estimate climbs to 50% (from the Center for Energy Workforce Development, [www.cewd.org](http://www.cewd.org)). Students who participate in the MEA program will be uniquely qualified to fill this growing need for a professional, diverse workforce. The MEA is also designed to prepare students for careers indirectly related to the energy industry, such as energy finance, environmental law, or energy brokering.

The MEA will prepare students for both academic college-bound and practical workforce-ready opportunities through cross-curricular courses in math, science, social studies, language arts, and business.

Completion of the MEA program will require 4 core courses: Geographic Information Systems (GIS), Principles of Energy Science, and Energy Industry Practices, and a Senior Project. Students will also be required to select three courses from the following list:

AP Chemistry	AP Computer Science	Introduction to Programming
AP Environmental Science	Welding*	Geology
AP Physics 1	Engineering Tech*	AP Calculus
AP Physics 2	Speech **	AP U.S. Government
AP Biology	Introduction to Business	Start Your Own Business
AP Economics	Business Law	AP Statistics
AP Language and Composition	Meteorology	AP Research
Marketing	AP Seminar	<b><i>This list is subject to change</i></b>
		<b><i>*CDC class ** FRCC class</i></b>

## MEA Senior Project and Internship

Along with rigorous coursework, Mead Energy Academy seniors will design and complete a research project in conjunction with the opportunity for an internship with an energy related organization. Through both internships and the research projects designed by students, MEA participants will interact with energy professionals, apply modern technology in their project and develop skills needed in the workplace.

## Careers in Energy:

### High School Diploma

Line Worker  
Driller  
Power Generation Technician  
Solar or Wind Technician  
Substation Mechanic  
Meter Technician  
Pipe layer  
Radiation Protection Technician  
Welder  
Lease Record Coordinator

### 2 year degree

Solar or Wind Installer  
Power Plant Operator  
Nuclear Reactor Operator  
Environmental Protection Technician

### 4 year degree or higher

Engineering  
Geologist  
Geophysicist  
Lawyer  
Government Relations Representative  
Lease Analyst  
Financial Planning Analyst  
Marketing Professional  
Health & Safety Advisor  
Environmental Scientist  
Information Technology Analyst  
Accountant

# Energy Academy Program

Students must meet all of the St. Vrain Valley School District graduation requirements. Advanced Placement and Honors courses are encouraged in the Energy Academy, however our goal is for the program to be accessible to all students interested in energy. In addition to the St. Vrain Valley School District requirements, students who wish to receive an Energy Academy certificate upon graduation must also complete the following requirements:

**Energy Academy Core Courses** - Each student must complete core Energy courses with a grade of a C or better:

Principles of Energy Science A & B (1.0 credit)

Energy Industry Practices A & B (1.0 credit)

GIS\*\* (.5 credit)

Internship & Capstone Project (.5 credit)

**Science** - Students must successfully complete a minimum of 4.0 science credits, which includes Biology, Chemistry, Principles of Energy Science and Energy Industry Practices. Additionally, students will need to complete GIS and Internship & Capstone Project. Students are required to have at least a C average or better in all semesters of the Energy Academy core courses to earn the Energy Academy certification.

**Energy Academy Electives** - Students will select 3 courses from the list below to complete as part of the Energy Academy Electives. These courses may be used as core or elective credits for graduation. If using these courses for core classes please ensure you have enough elective credits for graduation (8 total elective credits are needed for graduation). World Language and Energy Academy Core courses will count towards the St. Vrain Valley School District graduation requirements.

AP Chemistry

AP Physics C

Marketing

AP U.S. Government

Engineering Tech\*

Business Law

AP Seminar

AP Calculus

AP Environmental Science

AP Micro/Macro Economics

AP English Language and Composition

AP Computer Science Principles

Speech \*\*

AP U.S. History

Introduction to Programming

Start Your Own Business

AP Physics 1

AP Biology

AP Research

Welding\*

Introduction to Business

Meteorology

Geology

AP Statistics

This list is subject to change

\*CDC class

\*\* FRCC class

**World Language** - Students will need to complete a minimum of 2 .0 credits of the same world language.

**Mathematics** - Students must successfully complete 3.0 credits.

**English** - Students must complete 4.0 credits of English, which can include Honors and Advanced Placement courses.

# Energy Academy

## Sample Class Schedule for Energy Academy Students

Freshmen	Sophomore	Junior	Senior
<b>Principles of Energy (1)</b>	<b>Energy Industry Practices (1)</b>	<b>GIS (1)</b>	<b>Internship &amp; Capstone (1)</b>
Algebra 1/Math (1)	Geometry/Math (1)	Algebra 2 / Math (1)	Math (1)
Biology (1)	Chemistry (1)	Science (1)	Science (1)
English (1)	English (1)	English (1)	English (1)
World Geography (1)	U.S. History (1)	U.S./CO Government (1)	2 Electives (1)
World Language (1)	World Language (1)	World Language (1)	2 Electives (1)
Health/PE (.5 / .5)	PE (1)	Optional Electives	Optional Electives
PE and Elective (.5 / .5)	2 Electives (.5 / .5)	Optional Electives	Optional Electives
8 Credits	8 Credits	6 credits	6 credits