CHEMISTRY AND GEOSCIENCES COURSES

MCC credits transfer to some of the top-ranked colleges nationwide, including the Ivy League and major state colleges and universities.

Chemistry Courses

CHE 100 – Preparatory Chemistry (4 units) (SUNY NS)
CHE 110 – Chemistry of Indigence (3 units) (SUNY NS)
CHE 115 – Special Topics In Chemistry (3 units)
CHE 124 – General, Organic, and Biochemistry (4 units) (SUNY NS)
CHE 128 – Introductory Forensic Science (4 units) (SUNY NS)
CHE 146 – Preparation for General College Chemistry (4 units) (SUNY NS)
CHE 151 – General College Chemistry I (4 units) (SUNY NS)
CHE 152 – General College Chemistry II (4 units) (SUNY NS)
CHE 201 – Organic Chemistry I (5 units)
CHE 202 – Organic Chemistry II (5 units)
CHE 280 – Independent Study

Geography Courses

GEG 100 – Physical Geography II lecture (Spring 2013)

New and Future Geography Courses

GEG 290 – Independent Study
GEG 253 – Climate Change (3 units) (SUNY NS)
GEG 218/POS 218 – Political Geography (3 units) (SS)
GEG 211 – Economic Geography (3 units) (SUNY-SS)
GEG 130 – Digital Earth (3 units) (SUNY NS) – A GIS course
GEG 116 – Geology and History of the Erie Canal (3 units) (SS)
GEG 104 – Weather and Climate (3 units) (NS) *
GEG 100 – Physical Geography Laboratory (1 unit) (SUNY NS) *
GEG 101 – Physical Geography (3 units) (SUNY NS) *
GEG 102 – Human Geography (3 units) (SUNY-SS/OWC) *
GEG 104 – Weather and Climate (3 units) (NS) *
GEG 115 – Physical Geography II lab (1 unit) (SUNY NS)
GEG 111 – Physical Geography II (3 units) (SUNY NS)
GEG 130 – Digital Earth (SUNY NS) – A GIS course
GEG 131 – Introduction to Remote Sensing (3 units)
GEG 135 – Business GIS (3 units) (SUNY SS)
GEG 201 – Geography of United States and Canada (3 units) (SUNY SS)
GEG 203 – Extreme Climate lab (1 unit) (SUNY NS) *
GEG 204 – Extreme Climate (3 units) (SUNY NS) *
GEG 211 – Economic Geography (3 units) (SUNY SS)
GEG 215 – Geography of Tourism Destinations (3 units) (SS)
GEG 218 – Political Geography (3 units) (SS)
GEG 226 – Geography of Genocide (3 units) (SS)
GEG 280 – Independent Study

Geology Courses

GEO 102 – Preparatory Geology (4 units) (SUNY NS) *
GEO 103 – Introduction to Geology (4 units) (SUNY NS) *
GEO 102 – Preparatory Geology (4 units) (SUNY NS) *
GEO 103 – Introduction to Geology (4 units) (SUNY NS) *
GEO 103 – Great Mysteries of the Earth (3 units) *
GEO 105 – Astronomy (3 units) (SUNY NS)
GEO 106 – Introduction to Oceanography (3 units)
GEO 115 – Introductory Geology (1 unit) (SUNY NS)
GEO 116 – Special Topics in Geology (2 units)
GEO 116 – Special Topics in Geology (3 units)
GEO 117 – Our Changing Earth (3 units)
GEO 120 – Ancient Life (3 units)
GEO 137 – Dangerous Earth (3 units)
GEO 200 – Geology of the National Parks (4 units) (SUNY NS)
GEO 201 – Invertebrate Paleontology (4 units)
GEO 202 – Geomorphology (4 units)
GEO 204 – Introduction to Mineralogy (4 units)
GEO 210 – Environmental Geology (4 units) (SUNY NS)
GEO 254 – Geology of New York State (3 units)
GEO 280 – Independent Study
GEO 285 – Field Studies in the Geosciences (4 units)

GEO 100 – Preparatory Chemistry (4 units) (SUNY NS)
GEO 110 – Chemistry of Indigence (3 units) (SUNY NS)
GEO 115 – Special Topics In Chemistry (3 units)
GEO 124 – General, Organic, and Biochemistry (4 units) (SUNY NS)
GEO 128 – Introductory Forensic Science (4 units) (SUNY NS)
GEO 146 – Preparation for General College Chemistry (4 units) (SUNY NS)
GEO 151 – General College Chemistry I (4 units) (SUNY NS)
GEO 152 – General College Chemistry II (4 units) (SUNY NS)
GEO 201 – Invertebrate Paleontology (4 units)

PROGRAMS SUPPORTING OUR STUDENTS

• Chemistry Club
• Field trips to well-known geological and geographical sites
• Geography Awareness Week
Geosciences Clubs
• E-recycling
• Field trips
• Learning Centers – Natural Science Education Center (NSEC)
• Advisement and registration
• Sustainability Day
• Associate Degree in Geography offered.

MORE ABOUT CHEMISTRY & GEOSCIENCES

• Our Students
• Students enrolled in Spring 2014: 2,400
• Students come from all backgrounds and experiences
• Dedicated, supportive, and knowledgeable faculty
• Student focused
• Incorporation of active learning methods
• Full-time faculty – 16, Part-time faculty – 30
• Faculty include Ph.D.s: from University of Alabama, Purdue University, University of Rochester, University of Cincinnati, and University of California, Berkeley

• Facilities
• Weather Kiosk
• Telescope
• Rock and Mineral Collection
• Extensive set of topographic maps and GPS field equipment
• Chemistry equipment
  – Gas chromatography-mass spectrometry
  – Nuclear Magnetic Resonance
  – Fourier transform infrared spectroscopy
  – Vernier Logger Pro Program Interface
• Geoscience equipment
  – Domed Observatory for Astronomy
  – Interactive Weather Display
  – Geoscience Learning Lab
• Many faculty awards and honors
  – Chancellor’s Award
  – Geography and Geology Faculty NISOD Award
  – MCC Foundation Grant

Partnerships
• New York Geography Alliance

FROM OUR STUDENTS TO OUR PROFESSORS....

“… I think I want to switch from health sciences to earth science. In my experience, I had an amazing earth science teacher in high school and of course an awesome geography/weather and climate teacher who have both inspired me [at MCC]….”

“My entire experience at MCC has been wonderful. My professors are the best. The contacts I have made are life long, and everyone has such a positive attitude… You are definitely a part of this feeling. When you gave the lecture on Africa, it was captivating. You are an excellent motivational speaker. I appreciated your taking the time to share your experiences with us as well.”

“I just wanted to tell you that I got into Cornell a couple weeks ago. I am pretty excited. Your course sealed the deal for me regarding what direction I wanted to head down.”

DEPARTMENT INFORMATION

Full-Time Faculty and Staff Listing
DAN ROBERTSON, Chairperson
JUDY MILLER, Secretary
JASON ANDERSON
JESSICA BARONE
MICHAEL A. BOESTER
RYAN CLEMMENS
AMANDA COLOSIMO
MARY T. DISANO
BRIAN EDELBAUGH
JUDITH HILL
AMY IRWIN
MARGARET KAMINSKY
JONATHAN D. LITTLE
MARY OLDFIELD
HEATHER PIERCE
AZWANA SADIQUE
JASON SZYMANSKI
LYDIA TIEI
KARA TIERNEY

A student in the Chemistry Club.

Faculty and students on a field trip to Chimney Bluffs (Sodus Point, NY).
The Chemistry and Geosciences Department

Our department offers science and liberal arts courses for students in a variety of majors. Students interested in pursuing a bachelor’s degree in Chemistry, Geography, or Geology can complete courses that parallel the freshman and sophomore years at a four-year institution.

Whether you take courses that fulfill requirements in another major, or find your passion in continuing on to a bachelor’s degree in these fields, the faculty and programs of the Chemistry and Geosciences Department are among the best you’ll find anywhere.

Definitions

CHEMISTRY is the science that deals with the composition and properties of substances and various elementary forms of matter. To design a synthetic fiber, a life-saving drug, or a space capsule requires knowledge of chemistry.¹

GEOGRAPHY studies how physical, biological, and human processes shape the landscape in which we live and cause regions to differ from each other. Geography is everything!²

GEOLOGY is the scientific study of the Earth, the rocks of which it is composed, and in particular the history, the structure, the evolution of life, and the processes that have molded the Earth and its inhabitants.³

Sources:
¹ Merriam-Webster’s Medical Dictionary
² http://www.udel.edu/Geography/
³ http://www-geology.ucdavis.edu/fun/what.html

Employment & Career Outlook

If you are looking for some of the hottest careers and job possibilities for the next decade and beyond, chemistry, geography and geology may be in your future …

Chemistry Occupational Outlook
According to the Bureau of Labor Statistics, U.S. Department of Labor Occupational Outlook Handbook, 2014-2015 edition, the employment of chemists and material scientists is projected to grow 5-6% from 2012-2022. Chemists will continue to be needed in scientific research and development and to monitor the quality of products and processes. The demand for material scientists results from demands for cheaper, safer, and better quality materials for a variety of purposes such as electronics, energy, and transportation. About a quarter of all chemists are employed in chemical manufacturing industries, such as pharmaceutical manufacturing. In addition, chemists will have new opportunities in environmental research as industries look to reduce and monitor pollution levels and improve energy efficiency at manufacturing facilities.

Geography Occupational Outlook
According to the Bureau of Labor Statistics, U.S. Department of Labor Occupational Outlook Handbook, 2014-2015 edition, employment of geographers is projected to grow 29 percent from 2012 to 2022, much faster than the average for all occupations. More widespread use of geographic technologies, including geographic information systems (GIS), should drive job growth. Specifically, governments, businesses, and developers will need geographers to analyze information and offer advice on topics such as land use, building or infrastructure location, or environmental impact. Geographic analyses will be used to inform developers and policymakers of sustainable business practices and ensure adherence to increased regulations.

Geoscience/Geology Occupational Outlook
According to the Bureau of Labor Statistics, U.S. Department of Labor Occupational Outlook Handbook, 2014-2015 edition, employment of geoscientists is projected to grow 16 percent from 2012 to 2022, faster than the average for all occupations. The need for energy, environmental protection, and responsible land and resource management is projected to spur demand for geoscientists in the future. Geoscientists will be needed in planning for the construction of wind farms, geothermal power plants, and solar power plants. Alternative energies such as wind energy, geothermal energy, and solar power can use large areas of land and impact wildlife and other natural processes.