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| **密歇根州立大学(Michigan state university)** | [返回](http://59.72.66.9/services/wjzx/ktyj/mgdx.html) |
| **General Chemistry Courses**   |  |  | | --- | --- | | [CEM 141](http://www.chemistry.msu.edu/courses/cem141/index.html) | General Chemistry，Total Credits: 4 Elements and compounds; reactions; stoichiometry; thermochemistry; atomic structure; chemical bonding; states of matter; solutions; acids and bases; aqueous equilibria. | | [CEM 142](http://www.chemistry.msu.edu/courses/cem142/index.html) | General and Inorganic Chemistry，Total Credits: 3 Kinetics; gaseous equilibria; acids and bases; pH; buffers; hydrolysis; titrations; heterogeneous equilibria; thermodynamics; redox and electrochemistry; transition metal chemistry; nuclear chemistry; main group chemistry. | | [CEM 151](http://www.chemistry.msu.edu/courses/cem151/index.html) | Principles of Chemistry I，Total Credits: 4 Atomic structure, chemical bonding and molecular structure; solid state; main group chemistry; acids and bases; transition metal chemistry; coordination chemistry and theories of bonding. | | [CEM 152](http://www.cem.msu.edu/~mantica/cem152.html) | Principles of Chemistry II，Total Credits: 3 The mole concept and stoichiometry; solution stoichiometry; thermochemistry; gases, liquids, and solids; kinetics; chemical equilibria; acid-based equilibria; aqueous equilibria; thermodynamics; redox and electrochemistry. | | [CEM 161](http://www.chemistry.msu.edu/courses/cem161/index.html) | Chemistry Laboratory I | | [CEM 162](http://www.chemistry.msu.edu/courses/cem162/index.html) | Analytical and Inorganic Chemistry Lab | | [CEM 181H](http://www.cem.msu.edu/~djm/cem181f7/index.html) | Honors Chemistry I，Total Credits: 4 Elements and compounds; stoichiometry; reactions; atomic structure and quantum mechanics, chemical bonding and molecular structure; spectroscopy; coordination chemistry and theories of bonding; structure of biochemical molecules. | | [CEM 182H](http://www.chemistry.msu.edu/courses/cem182H/index.html) | Honors Chemistry II，Total Credits: 4 Thermodynamics and chemical equilibria; acids and bases; redox chemistry; main group elements; solid state; group theory and symmetry; molecular orbital theory; transition metal chemistry and spectroscopy. | | [CEM 185H](http://www.chemistry.msu.edu/courses/CEM185/index.html) | Honors Chemistry I Laboratory | | CEM 186H | Honors Chemistry II Laboratory | | [CEM 444](http://www.chemistry.msu.edu/courses/cem444/) | Chemical Safety | | [ISP 207](http://www.chemistry.msu.edu/courses/isp207/ISP207.pdf) | World of Chemistry，Total Credits: 3 The language, concepts, models and techniques of chemical science, including atomic theory; nuclear energy; acids; chemicals in air, water, food and biological systems. | | [ISP 207 L](http://www.chemistry.msu.edu/courses/isp207/ISP207L.pdf) | World of Chemistry Laboratory | | |