Chemistry, M.S.

Degree Requirements

- **Completed Plan of Study indicating either Thesis or Coursework Degree Track**
- **Credit Hours:** Students are required to complete a minimum of 30 graduate credit hours in Chemistry at the 500, 600, and 700 level.
- **Grade Point Average:** Students must earn a minimum cumulative GPA of 2.75 and a minimum grade of B- in all courses applied to the degree.
- **Graduation Requirements**
  - Thesis Track:
    - Complete a plan of study.
    - Complete at least 21 formal (graded) course credit-hours; up to 6 hours of research credit; up to 3 hours of seminar credit.
      - Up to 10 formal (graded) course credit-hours may come from outside of CHEM to be approved by the Graduate Advising Committee prior to the beginning of the semester in which they are offered.
    - Complete and defend a Master's thesis.
  - **Coursework Track:**
    - Complete a plan of study.
    - Complete at least 24 formal (graded) course credit-hours; up to 3 hours of research credit; up to 3 hours of seminar credit.
      - Up to 10 formal (graded) course credit-hours may come from outside of CHEM to be approved by the Graduate Advising Committee prior to the beginning of the semester in which they are offered.
- **Benchmarks:** For details, go to the Chemistry Degree Progress tab (http://catalog.wvu.edu/graduate/eberlycollegeofartsandsciences/chemistry/#degreeprogresstext)

Curriculum Requirements

Code	Title	Hours
CORE REQUIREMENTS		**21**
Any CHEM courses at the 500, 600, or 700 level *		
DEGREE TRACK		**9**
Select one track:		
Thesis Track:		
CHEM 797	Research (repeated; up to 6 credit hours)	
CHEM 796	Graduate Seminar (repeated; up to 3 credit hours)	
CHEM 789	Research Seminar (repeated; up to 3 credit hours)	
Coursework Track:		
Any CHEM course at the 500, 600, 700 level (3 credits) *		
Select a combination of options below:		
Any CHEM course(s) at the 500, 600, 700 level (up to 6 credit hours) *		
CHEM 797	Research (repeated; up to 3 credit hours)	
CHEM 796	Graduate Seminar (repeated; up to 3 credit hours)	
CHEM 789	Research Seminar (repeated; up to 3 credit hours)	
Total Hours		**30**

* Excluded courses include CHEM 789, 790, 795, 796, 797.

Major Learning Outcomes

CHEMISTRY

The graduate programs in the C. Eugene Bennett Department of Chemistry provide rigorous training in chemistry. The central mission of the Graduate Program is to train the next generation of Chemists for productive careers in the global economy.

Students earning a M.S. in Chemistry (Thesis Track) will be able to:

- Communicate chemical concepts orally and in writing.
- Explain chemical principles as they pertain to their specific field of research.

- Demonstrate the ability to understand and critically evaluate the existing literature published within their field of research.
- Generate quality data using a variety of experimental and/or computational techniques.
- Effectively communicate their research in oral and written formats.
- Inquire about and prepare for various career opportunities with their advanced degree.
- Learn and adopt best safety practices (chemical hygiene, personal protective wear, proper handling of chemical waste streams, etc.) in chemical research.
- Learn and apply the ethical impact of personal and professional behavior.
- Understand and apply good laboratory practices (chemical hygiene, personal protective wear, etc.) and the proper handling of chemical waste streams.
- Generate quality data using a variety of experimental and/or computational techniques.
- Interpret the meaning and implication of their data.
- Effectively communicate their research in oral and written formats, including the ability to author manuscripts suitable for publication in peer reviewed scientific journals.
- Understand the ethical impact of personal and professional behavior.

Students earning a M.S. in Chemistry (Coursework Track) will be able to:

- Communicate chemical concepts orally and in writing.
- Demonstrate the ability to understand and critically evaluate contemporary chemical literature.
- Inquire about and prepare for various career opportunities with their advanced degree.
- Learn and adopt best safety practices (chemical hygiene, personal protective wear, proper handling of chemical waste streams, etc.) in the chemical enterprise.
- Learn and apply the ethical impact of personal and professional behavior.