

Degree Requirements

Master of Science in Geosciences, Water Sciences Concentration

Thesis Option (36 credit hours)

Early in their graduate studies, students must select a faculty advisor to direct their programs of study and to appoint their committee. Students should consult with faculty members to align their course of study with desired professional licensure and certification appropriate to their desired career trajectory – for example, either the American Institute of Hydrology’s Professional Hydrologist Certification, or the Association of State Boards of Geology’s Professional Geologist Licensure Examination.

1. Department Requirements (13 credit hours):
 - a. [GEOS 8002](#) Geoscience Research Methods (3)
 - b. [GEOS 6095](#) Seminar (1)
 - c. [GEOS 8999](#) Thesis Research (9)
 - d. Successfully defend thesis in public presentation
2. Core Required Water Sciences Courses (8 credit hours):
 - a. [GEOS 6650](#) Surface Water Hydrology (4)
 - b. [GEOS 6007](#) Hydrogeology (4)
3. Elective Water Sciences Courses (Minimum 8 hours):
 - a. [GEOS 6003](#) Aqueous Geochemistry (4)
 - b. [GEOS 6642](#) Advanced Weather and Climate (4)
 - c. [GEOS 6646](#) Water Resources Management (4)
 - d. [GEOS 8040](#) Seminar in Hydrology and Geomorphology (4)
 - e. [BIOL 6451](#) Aquatic Pollution and Toxicology (4)
4. Related Geoscience Skills Courses (Minimum 6 hours):
 - a. [GEOS 6520](#) Quantitative Spatial Analysis (OR APPROVED statistics substitute) (3-4)
 - b. [GEOS 6532](#) GIS (4)
 - c. [GEOS 6534](#) Advanced Geographic Information Systems (4)
 - d. Geos 6xxx GIS Programming (OR APPROVED Comp Sci substitute) (4)
 - e. [GEOS 6123](#) Geoinformatics (4)
 - f. [GEOS 6042](#) Environmental Instrumentation (4)
 - g. [PH 7299](#) Sampling of the Environment (3)

5. Other Water Related Elective Courses (Maximum 8 hours toward degree):
 - a. [GEOS 6644](#) Environmental Conservation (4)
 - b. [GEOS 6640](#) Geomorphology (4)
 - c. [GEOS 6017](#) Environmental Geology (4)
 - d. [GEOS 6784](#) Climatic Change (4)
 - e. [PH 7297](#) Global Water, Sanitation, & Hygiene (3)

Non-Thesis Option

1. All above requirements, except 1-C and 1-D.
2. An additional 6 (or more) credits of GEOS graduate courses.
3. Pass a written comprehensive examination.
4. GEOS 8990 (3) – Research Practicum (in consultation with a faculty member)
5. Pass an oral examination of the research project carried out in GEOS 8990.