

GEOLOGY, MS

Natural Sciences, Mathematics, and Engineering (nsme) (<https://catalog.csub.edu/general-information/csub-information/school-natural-sciences-mathematics-engineering/>)

Department of Geological Sciences (<https://catalog.csub.edu/general-information/csub-information/school-natural-sciences-mathematics-engineering/department-geological-sciences/>)

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www.csub.edu/geology (<http://www.csub.edu/geology/>)

Program Maps for Natural Sciences, Mathematics, and Engineering (<https://programmmap.csub.edu/academics/interest-clusters/4e942a6e-b8e4-4b60-a1ae-334235acc581/>)

Program Requirements Thesis Track (30 units)

Code	Title	Units
GEOL 5100	Research Methods and Strategies	2
GEOL 5200	Advanced Professional Development for MS Students	2
GEOL 6090	MS Thesis Proposal Defense	1
GEOL 6100	MS Thesis Research	4
GEOL 6200	MS Thesis Defense	1

A minimum of 20 units selected from 4000-level, 5000-level, and 6000-level courses (with at least 8 units from 5000-level or 6000-level courses). Relevant graduate-level courses in other fields may be substituted with prior Program Director and Thesis Committee approval.

GEOL 4060 Fundamentals of Petroleum Exploration and Production

and 8 additional units in approved petroleum geology focused courses are required for the optional concentration in Petroleum Geology

GEOL 4010 Hydrogeology

and 8 additional units in approved hydrogeology focused courses are required for the optional concentration in Hydrogeology

Total Units 30

Non-Thesis Track (30 units)

Code	Title	Units
GEOL 5100	Research Methods and Strategies	2
GEOL 5200	Advanced Professional Development for MS Students	2
GEOL 6300	MS Non-Thesis Culminating Experience	1

A minimum of 25 units selected from 4000-level, 5000-level, and 6000-level courses (with at least 13 units from 5000-level or 6000-level courses). Relevant graduate-level courses in other fields may be substituted with prior Program Director approval.

GEOL 4060 Fundamentals of Petroleum Exploration and Production

and 8 additional units in approved petroleum geology focused courses are required for the optional concentration in Petroleum Geology

GEOL 4010 Hydrogeology

and 8 additional units in approved hydrogeology focused courses are required for the optional concentration in Hydrogeology

Total Units 30

Requirements for the Certificate in Hydrogeology

The certificate requires at least 16 semester units of credit and shall be composed of the following required and elective courses:

Code	Title	Units
GEOL 4010	Hydrogeology	4
Select 12 credits from the following:		12
GEOL 4020	Environmental Geochemistry	
GEOL 4770	Special Topics in Geology ¹	
GEOL 4771	Special Topics in Geology 2 ¹	
GEOL 5020	Applied Hydrogeochemistry	
GEOL 5030	Contaminant Hydrogeology	
GEOL 5810	Advanced Research Participation ¹	
GEOL 6050	Groundwater Modeling	
GEOL 5770	Advanced Topics ¹	
GEOL 5771	Advanced Topics 2	
GEOL 6770	Advanced Topics in Geology ¹	
Total Units		16

¹ when pertinent to hydrogeology as determined by the Program Director