

The Mines graduate certificate in Carbon Capture Utilization and Storage (CCUS) is a three-course, 9 credit, online program that provides graduate-level learning opportunities in climate and societal impacts of elevated levels of atmospheric CO₂, quantitative assessment methods of CO₂ mitigation, as well as economic and policy analysis of a CCUS economy. By bringing salient aspects of CCUS under one umbrella, students gain and develop the knowledge and expertise to make informed decisions on CO₂ mitigation strategies, technologies, and can guide company and/or government policy and economic decisions.

The CCUS certificate program provides students with engaging learning experiences to understand and guide science-based discussions around climate change and how to assess it using environmental data and modeling methods; explore CO₂ capture and utilization technologies, and assess geologic utilization and sub-surface storage options. The program equips students with scientific knowledge about each CCUS topic and various technical CO₂ mitigation solutions and their risks. The program combines the expertise from our world-renowned graduate programs in Earth Sciences, Engineering, and Economics and Business and distills them into a certificate program on CCUS technologies and CCUS economy. This program is designed for professionals and recent graduates who want to acquire new skills for career advancement or get a head start on an advanced graduate degree. Courses in the program focus on real-world and current challenges and progress in CCUS techniques, and CCUS economics. The certificate program requires three 3-credit graduate courses identified below: two required courses and the option to choose an elective in either geologic or non-geologic CCUS.

REQUIRED COURSES:

SYGN520	CLIMATE CHANGE AND SUSTAINABILITY	3.0
EBGN598	POLITICAL ECONOMY OF THE ENERGY TRANSITION	3.0

ELECTIVE COURSE:

GPGN598AB	GEOLOGICAL CARBON CAPTURE UTILIZATION AND SEQUESTRATION	3.0
OR		
SYGN598C	CARBON REDUCTION: CAPTURE & UTILIZATION	3.0