Minor in Space Mining

Space Mining Minor

Program Advisor: Dr. Jamal Rostami

Students enrolled in this program will gain insight into the basic knowledge in planetary geology, exploration methods, and resource/ reserve estimation and valuation. In addition, they will also gain practical knowledge in applications of various equipment necessary for excavation and the production of basic materials needed to build sustainable habitats and infrastructures. Program advisors include the faculty members of the Mining Engineering Department and those of the Center for Space Resources (CSR). They will advise students in the selection of a proper course sequence and guide them to complete projects.

A total of six courses or 18 credits is required to complete a minor in Space Mining in the department of Mining Engineering. This minor program will prepare students to further specialize in ISRU engineering. The first three required courses will provide the students with basic knowledge related to space resources. The subsequent courses will give students applied knowledge in more focused areas in space mining.

Required for all students:		9.0
MNGN210	INTRODUCTORY MINING	
GEOL410	PLANETARY GEOLOGY	
SPRS401	SPACE RESOURCES FUNDAMENTALS	
At least three courses from the list below		9.0
Total Semester Hrs		**18.0**

At least three of courses from the following list are needed to complete a minor in Space Mining:		**9.0**
EBGN310	ENVIRONMENTAL AND RESOURCE ECONOMICS	
EBGN321	ENGINEERING ECONOMICS	
EDNS430	CORPORATE SOCIAL RESPONSIBILITY	
GEGN403	MINERAL EXPLORATION DESIGN	
GEOL470	APPLICATIONS OF SATELLITE REMOTE SENSING	
MNGN312	SURFACE MINE DESIGN	
MNGN321	INTRODUCTION TO ROCK MECHANICS	
MNGN322	INTRODUCTION TO MINERAL PROCESSING AND LABORATORY	
MNGN333	EXPLOSIVES ENGINEERING I	
MNGN335	COMMUNITIES AND NATURAL RESOURCE DEVELOPMENT	
MNGN407	ROCK FRAGMENTATION	
MNGN427	MINE VALUATION	
MTGN461	TRANSPORT PHENOMENA AND REACTOR DESIGN FOR METALLURGICAL AND MATERIALS ENGINEERS	
MTGN462	SOLID WASTE MINIMIZATION AND RECYCLING	
MNGN470	SAFETY AND HEALTH MANAGEMENT IN THE MINING INDUSTRY	
MNGN498	DATA ANALYTICS FOR RESOURCES ENGINEERING	
MNGN502	GEOSPATIAL BIG DATA ANALYTICS	
MNGN567	SUSTAINABLE DEVELOPMENT AND EARTH RESOURCES	
MNGN570	SAFETY AND HEALTH MANAGEMENT IN THE MINING INDUSTRY	
MEGN441	INTRODUCTION TO ROBOTICS	

Primary Contact

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