Sustainable
Mineral
Resources
Minor

Customize your track!

Core Courses

Minimum of 6 units of core coursework
One core course must be completed before starting electives (exceptions may be allowed with School approval)
• MNE/ANTH 201 Nonrenewable Resources and World Civilizations – Gen Ed Fall 2022
• MNE/ENGR 422 Perspectives of Sustainability: Supplying Mineral Resources for Society – Gen Ed Fall 2022
• MIN 236 Materials, Societies, & Choices – New; Gen Ed Spring 2023

Mining & Recycling
• *GEOG 251 Physical Geology (4 units)
• GEOG 446 Economic Mineral Deposits
• MNE 205 Introduction to Mining Engineering
• MNE 210 Mineralogy and Petrology for Engineers
• MNE 411 Mineral Processing
• *MNE 427 Geomechanics
• MSE 450 Materials Selection
• MNE XXX: Recycling and Reclamation

Leadership & Communication
• BNA 320 Human Side of Organizations
• COMM 117 Culture and Communications
• COMM 201 Introduction to Public Relations
• COMM 312 Applied Organizational Communications
• COMM 404 Communications and Leadership
• ENVS 415 Translating Environmental Science
• PR 423 Crisis Communication and Public Relations

Business & Economics
• ACCT 250 Survey of Accounting or BNAD 304 (3 units) Survey of Finance
• GEOG 362 Environment and Development
• MNE 205 Introduction to Mining Engineering
• MNE 430 Mine Examination and Valuation
• MGMT 202 Ethical Issues in Business or PHIL 322 (3 units) Business Ethics
• SIE 265 Engineering Management I
• SIE 422 Engineering Decision Making Under Uncertainty

Data Analytics & Automation
• ESOC 214 Introduction to Data Science
• GEOG 222 Working with Numeric, Spatial, and Visual Data Fundamental Geographic Techniques
• GEO 280 Programming and Data Analysis in the Earth Sciences
• RNR 403 Application of Geographic Information Systems
• *ISTA 131 Dealing with Data (4 units)
• ISTA 321 Data Mining and Discovery
• ISTA 322 Data Engineering

Environmental
• EHS 426 Topics in Environmental Justice or ENVS 310 Ecosystem Health and Justice
• ENVS 305 Pollution Science
• ENVS 340 Environmental Chemistry
• ENVS 482 Reclamation and Redevelopment of Impacted Lands
• HWR 201 Water science and the Environment
• HWR 350 Principles of Hydrology
• PA 484 Environmental Management
• SIE 466 Life Cycle Analysis for Sustainable Design and Engineering

Health & Safety
• EHS 375 Introduction to Environmental & Occupational Health or EHS 484 Fundamentals of Industrial and Environmental Health
• MNE 418 Introduction to Human Risk Assessment
• MNE 424 Miner Health: Fitness-for-Duty, Mitigating, Exposures, and Managing Disease Risk
• MNE 425 Historic and Contemporary Role of US Regulatory Agencies (OSHA, MSHA, EPA) or PHP 421 Introduction to Public Health Law and Ethics
• *MNE 297A Underground Mine Safety (1 unit)
• *MNE 297B Operation and Maintenance of Heavy Mining Equipment (1 unit)
• *MNE 297C Fundamentals of Mine Rescue (1 unit)
• MNE 426 Health and Safety in Mining
• MNE 425 Mine Emergencies and Disasters: Prevention, Response, and Recovery

Society & Policy
• AIS 220 Contemporary American Indian Issues or GEOG 250 Environment and Society in the Southwest Borderlands
• AIS 441A Natural Resource Management in Native Communities or ANTH 331 Anthropology and Development
• GEOG 462 Environmental Law, Geography, and Society or RNR 480 Natural Resources Policy and Law
• PA 482 Environmental Governance
• PHIL 333 Environmental Ethics
• RNR 485 The Economics & Social Connections to Natural Resources
• SBE 201 Sustainable Design and Planning
• SOC 307 Environmental Sociology

Capstone Experience
Minimum 3 upper division units (one unit completed in final semester)
Two pathways
1. Complete MIN 4XX: Capstone Course
   • *MIN 4XX: Seminar 1 (1 unit)
   • *MIN 4XX: Seminar 2 (1 unit)
   • *MIN 4XX: Seminar 3 (1 unit)
   • *MIN 4XX: Research Project (1 unit)
   • *MIN 4XX: Internship (1-2 units)
     • Requires alignment with interdisciplinary goal of School
     • Must be outside major
     • Approval from School advisor, program coordinator, or program manager
2. Complete a combination of an internship, seminars, and/or research project.
   • *MIN 4XX: Seminar 1 (1 unit)
   • *MIN 4XX: Seminar 2 (1 unit)
   • *MIN 4XX: Seminar 3 (1 unit)
   • *MIN 4XX: Research Project (1 unit)
   • *MIN 4XX: Internship (1-2 units)
   • Requires alignment with interdisciplinary goal of School
   • Must be outside major
   • Approval from School advisor, program coordinator, or program manager

All courses are 3 units unless marked with an * . The number of units for courses marked with an * are given in parenthesis.