

Degree Programs, Emphasis Areas, Minors and Certificates
Missouri University of Science and Technology

(Degree programs are in capitals. Emphasis areas are lower case subheads followed by degree abbreviation if restricted to that degree.)
as of 05/18/2023

AEROSPACE ENGINEERING (BS, MS, PhD) MI
APPLIED MATHEMATICS (BS, MS) MI
Actuarial Science (BS)
Algebra (MS)
Algebra/Discrete Mathematics (BS)
Applied Analysis
Computational Mathematics
Data Science and Statistics (BS)
Secondary Education (BS)
Statistics (MS)
ARCHITECTURAL ENGINEERING (BS)
Construction Eng & Project Mgt
Construction Materials
Environmental Systems for Buildings
Structural Engineering
BIOLOGICAL SCIENCES (BA, BS, MS) MI
Medical Laboratory Scientist (BS)
Pre-Medicine (BA)
Secondary Education (BA)
BUSINESS ADMINISTRATION (MBA)
BUSINESS AND MANAGEMENT SYSTEMS (BS)
E-commerce
Enterprise Resource Planning
Finance
Human Computer Interaction
Management Information Systems
Marketing
Secondary Education
CERAMIC ENGINEERING (BS, MS, PhD)
Biomaterials (MS)
CHEMICAL ENGINEERING (BS, MS, PhD, DE)
Biochemical Engineering (BS)
CHEMISTRY (BA, BS, MS, MST, PhD) MI
Biochemistry (BS)
Polymer & Coatings Science (BS)
Pre-Medicine (BS)
Secondary Education (BA)
CIVIL ENGINEERING (BS, MS, PhD, DE)
Construction Engineering
Environmental Engineering
Geotechnical Engineering
Materials Engineering
Structural Engineering
Transportation Engineering
Water Resources Engineering
COMPUTER ENGINEERING (BS, MS, PhD) MI
Computational Intelligence
Computer Architecture and Embedded Systems
Integrated Circuits and Logic Design
Networking, Security, and Dependability
COMPUTER SCIENCE (BS, MS, PhD) MI
Critical Infrastructure Protection (MS)
Software Engineering (MS)
ECONOMICS (BA, BS) MI
Economics/Business (BS)
Secondary Education (BA)
EDUCATION (BS)
Early Childhood Education (pre K-3)
Educational Studies
Elementary
Middle School Language Arts
Middle School Math
Middle School Science
Middle School Social Studies
ELECTRICAL ENGINEERING (BS, MS, PhD, DE) MI
Circuits and Electronics
Communications and Signal Processing
Computer Engineering
Controls and Systems
Electromagnetics
Optics and Devices
Power and Energy
Solar Energy (MS)
ENGINEERING MANAGEMENT (BS, MS, PhD) MI
Industrial Engineering (BS)
Management of Technology (BS)
Manufacturing Engineering (BS)
Packaging Engineering (BS)
Public Works (MS)
Quality Engineering (BS)
ENGLISH AND TECHNICAL COMMUNICATION (BS)
English Education
ENVIRONMENTAL ENGINEERING (BS, MS)
ENVIRONMENTAL SCIENCES (BS)
EXPLOSIVES ENGINEERING (MS, PhD) MI
EXPLOSIVES TECHNOLOGY (MS)
GEOLOGICAL ENGINEERING (BS, MS, PhD, DE) MI
Engineering Geology and Geotechnics (BS)
Environ Protect & Haz Waste Mgt (BS)
Groundwater Hydro & Contaminant Transport (BS)
Petroleum, Energy and Natural Resources (BS)
Quarry Engineering (BS)
Hazardous Waste Engineering & Science (MS)
GEOLOGY AND GEOPHYSICS (BS, MS, PhD)
Exploration Geochemistry (MS, PhD)
Exploration Geophysics (MS, PhD)
Geochemistry (BS)
Geology (BS)
Geophysics (BS)
Groundwater & Environmental Geochemistry (BS)
Petroleum Geology (BS)
GEOTECHNICS (ME)
HISTORY (BA, BS) MI
Secondary Education (BA)
INDUSTRIAL ORGANIZATIONAL PSYCHOLOGY (MS)
INFORMATION SCIENCE & TECHNOLOGY (BS, MS) MI
Enterprise Resource Planning
Human Computer Interaction (BS)
MANUFACTURING ENGINEERING (MS, ME)
MATERIALS SCIENCE AND ENGINEERING (MS, PhD)
MATHEMATICS (MST, PhD) MI
Computational and Applied Mathematics (PhD)
Statistics (PhD)
MECHANICAL ENGINEERING (BS, MS, PhD, DE)
Control Systems
Energy Conversion
Environmental Systems
Instrumentation
Manufacturing Processes
Materials Science
Mechanical Design and Analysis
Systems Integration
Thermal Science
METALLURGICAL ENGINEERING (BS, MS, PhD)
Chemical Metallurgy (BS)
Manufacturing Metallurgy (BS)
Physical Metallurgy (BS)
MINING ENGINEERING (BS, MS, ME, PhD, DE) MI
Coal (BS)
Explosives Engineering (BS)
Mining & the Environment (BS)
Mining Health and Safety (BS)
Quarry Engineering (BS)
Sustainable Development (BS)
MULTIDISCIPLINARY STUDIES (BA)
French Language and French Speaking Cultures
Global Engineering
Spanish Language and Spanish Speaking Cultures
NUCLEAR ENGINEERING (BS, MS, PhD, DE) MI
PETROLEUM ENGINEERING (BS, MS, PhD, DE) MI
PHILOSOPHY (BS) MI
PHYSICS (BS, MS, MST, PhD) MI
Applied Physics (BS)
Geophysics (BS)
Secondary Education (BS)

PSYCHOLOGY (BA,BS) MI
 Cognition and Neuroscience
 Diversity and Inclusion (BA)
 Health Psychology
 Human Factors
 Industrial Organizational Psychology
 Secondary Education (BA, BS)

SYSTEMS ENGINEERING (MS, PhD)
 TECHNICAL COMMUNICATION (MS) MI
 WATER SCIENCE AND ENGINEERING (MS)

Updated 05/18/2023

MINORS

(In addition to those designated MI on previous page)

Adaptive Leadership
 American Studies
 Art
 Artificial Intelligence and Machine Learning in Business
 Automation Engineering
 Bioinformatics
 Biomedical Engineering
 Business
 Business Analytics & Data Science
 Business Applications and Software Development
 Cognitive Neuroscience
 Communication Studies
 Construction Engineering & Management
 Creative Writing
 Cybersecurity Management and Information Assurance
 Digital Supply Chain Management
 Electronic and Social Commerce
 Energy Technology
 Enterprise Resource Planning
 Entrepreneurship
 Ethics
 Explosives Engineering *
 Film and Literature

Finance
 Financial Technology, Analytics and Transformation
 French
 Game Studies
 Geology
 German
 Global Studies
 Global Sustainable Economics
 Human-Computer Interaction & User Experience
 Human Factors Psychology
 Ind/Organizational Psych
 International Economics
 Latin American Studies for Technical Applications
 Leadership Communication
 Linguistics
 Literature
 Literature and Film
 Management
 Marketing
 Military Aerospace Studies
 Mineral Process Engineering
 Mobile Business and Technology

Multiculturalism & Diversity
 Music
 Philosophy of Technology
 Political Science
 Pre-Law
 Pre-MBA
 Pre-Medicine
 Psychology for Health Care
 Psychology of Leadership
 Russian
 Science, Technology & Humanity
 Social Media in Industry
 Sociology
 Spanish
 Studio Art
 Sustainability
 Technical Communication*
 Theatre
 Writing

* Indicates undergraduate & graduate level minor
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UNDERGRADUATE CERTIFICATES

Certificate

Automation Engineering
 Bioinnovation
 Decision Data Analytics
 Energy Economics
 Explosives Engineering
 Explosives Technology
 Financial Economics and Technology
 Intercultural Studies
 Logic and the Philosophical Foundations of STEM
 Medicinal Chemistry
 Medieval and Renaissance Studies
 Military and Security Studies
 Professional Ethics and Moral Reasoning
 Science, Technology, and Society
 Teaching and Learning
 Technical Writing
 Technology, Philosophy, and Ethical Futures
 War and Society

Discipline

Electrical Engineering
 Biological Sciences
 Economics
 Economics
 Mining Engineering
 Mining Engineering
 Economics
 Multidisciplinary Studies
 Philosophy
 Chemistry
 History
 History
 Philosophy
 History
 Teacher Education and Certification
 Technical Communication
 Philosophy
 History

Updated 05/18/2023

GRADUATE CERTIFICATES

Certificates

Actuarial Science
 Advanced Control Systems
 Advanced Engineering Materials
 Advanced Materials for Sustainable Infrastructure
 Aggregates Management
 AI, Machine Learning and Automation in Business
 Applied Workplace Psychology
 Automation Engineering and PLC
 Big Data Management and Analytics
 Big Data Management and Security
 Building Systems Engineering
 Business Analytics and Data Science
 Business Essentials
 Business Intelligence
 Business Project Management
 CAD/CAM and Rapid Product Realization
 Carbon Management Engineering
 Chemical Process Engineering
 Composite Materials and Structures
 Computational Intelligence
 Contemporary Structural Engineering
 Control Systems
 Cyber Physical Systems
 Cyber Security
 Cybersecurity and Information Assurance Management
 Digital Media and Web Design
 Digital Supply Chain Management
 Electric Machine and Drives
 Electrical Power Systems Engineering
 Electronic and Social Commerce
 Energy Conversion and Transport
 Engineering Management
 Engineering Mechanics
 Enterprise Resource Planning
 Entrepreneurship and Technological Innovation
 Explosives Engineering
 Explosives Technology
 Finance
 Financial Engineering
 Financial Mathematics
 Financial Technology
 Foundations of Supply Chain Integration Systems
 Geoanalytics and Geointelligence
 Geoenvironmental Engineering
 Geoenvironmental Science and Engineering
 Geologic Hazards
 Geophysics
 Geotechnical Earthquake Engineering
 Geotechnics
 Human-Computer Interaction and User Experience
 Human Factors Psychology
 Human Systems Integration
 Information Assurance & Security Officer Essentials
 Information System Project Management
 Information Systems and Cloud Computing
 Infrastructure Renewal
 Iron and Steel Metallurgy
 Lean Six Sigma
 Management and Leadership
 Management for Sustainable Business
 Manufacturing Automation
 Manufacturing Systems
 Materials for Extreme Environments
 Military Construction Management
 Military Geological Engineering
 Mine Reclamation
 Mining Engineering
 Mining Project Evaluation
 Mobile Business and Digital Transformation
 Model Based Systems Engineering
 Modeling and Simulation for Decision Systems
 Nuclear Nonproliferation
 Petroleum Systems
 Project Engineering and Construction Management
 Project Management
 Safety Engineering
 Software Design and Development

Discipline

Mathematics
 Electrical Engineering
 Materials Science and Engineering
 Civil Engineering
 Mining Engineering
 Information Science & Technology
 Psychology
 Electrical Engineering
 Computer Science
 Computer Science
 Civil Engineering
 Information Science & Technology
 Business Administration
 Information Science & Technology
 Business Administration
 Manufacturing Engineering
 Chemical Engineering
 Chemical Engineering
 Aerospace Engineering/Mechanical Engineering
 Systems Engineering/Computer Engineering/Computer Science
 Civil Engineering
 Mechanical Engineering
 Computer Engineering/Systems Engineering
 Computer Science
 Information Science and Technology
 Information Science & Technology
 Information Science & Technology
 Electrical Engineering
 Electrical Engineering
 Information Science & Technology
 Aerospace Engineering/Mechanical Engineering
 Engineering Management
 Aerospace Engineering/Mechanical Engineering
 Information Science & Technology
 Business Administration
 Explosives Engineering
 Explosives Engineering
 Business Administration
 Engineering Management/Systems Engineering
 Mathematics
 Business Administration
 Engineering Management
 Geological Engineering
 Civil Engineering
 Geological Engineering and Geology and Geophysics
 Geological Engineering
 Geology and Geophysics
 Civil Engineering
 Geotechnics
 Information Science & Technology
 Psychology
 Engineering Management/Information Science & Technology
 Computer Engineering/Computer Science
 Information Science & Technology
 Computer Science
 Civil Engineering
 Metallurgical Engineering
 Engineering Management
 Business Administration
 Economics
 Mechanical Engineering
 Manufacturing Engineering
 Materials Science and Engineering
 Engineering Management
 Geological Engineering
 Mining Engineering
 Mining Engineering
 Mining Engineering
 Information Science & Technology
 Systems Engineering
 Engineering Management
 Nuclear Engineering
 Geology and Geophysics
 Civil Engineering/Engineering Management
 Engineering Management
 Chemical and Biochemical Engineering/Engineering Management
 Computer Science

Space Resources
Statistics
Subsurface Water Resources
Surface Water Resources
Sustainability in Mining
Systems Engineering
Systems and Software Architecture
Systems of Human Capital Management
Professional Communication
Wireless Networks and Mobile Systems

Geological Engineering
Mathematics and Statistics
Geological Engineering
Civil Engineering
Mining Engineering
Systems Engineering
Computer Science
Engineering Management
Technical Communication
Computer Science

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TEACHER CERTIFICATION PROGRAMS

Elementary Education Certification
- Education (BS)
-Early Childhood Education (pre K-3)
-Elementary

Middle School Education Certification
- Education (BS)
-Middle School Language Arts
-Middle School Math
-Middle School Science
-Middle School Social Studies

Secondary Education Certification
-Applied Mathematics BS
-Biological Sciences BA
-Business and Management Systems BS
-Chemistry BA
-Economics BA
-English BS
-History BA
-Physics BS
-Psychology BA, BS

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