

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 08/06/2025

AEROSPACE ENGINEERING (BS, MS, PhD) MI
APPLIED MATHEMATICS (BS, MS) MI
 Actuarial Science (BS)
 Algebra (MS)
 Applied Analysis (MS)
 Computational Mathematics
 Data Science and Statistics (BS)
 Secondary Education (BS)
 Statistics (MS)
APPLIED PSYCHOLOGY (PhD)
ARCHITECTURAL ENGINEERING (BS)
 Construction Eng & Project Mgt
 Construction Materials
 Environmental Systems for Buildings
 Structural Engineering
BIOENGINEERING (PhD)
BIOLOGICAL SCIENCES (BA, BS, MS, PhD) MI
 Medical Laboratory Scientist (BS)
 Pre-Medicine (BA)
 Secondary Education (BA)
 Stem Education (MS)
BIOMEDICAL ENGINEERING (BS) MI
BUSINESS ADMINISTRATION (MBA)
BUSINESS AND MANAGEMENT SYSTEMS (BS)
 Military Science and Leadership
 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 (BS)
 Decision Data Analytics
 Economics/Business
 Energy Economics
 Financial Economics & Tech
ECONOMICS and INNOVATION (MS)
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 SCIENCE (BS)
 Secondary Education
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)
 Hazardous Waste Engineering & Science (MS)
 Petroleum, Energy and Natural Resources (BS)
 Quarry Engineering (BS)
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)
GEOSPATIAL ENGINEERING (MS)
GEOTECHNICS (ME)
HISTORY (BA, BS) MI
 National Security
 Secondary Education (BA)
INDUSTRIAL-ORGANIZATIONAL PSYCHOLOGY (MS)
INFORMATION SCIENCE & TECHNOLOGY (BS, MS) MI
MANUFACTURING ENGINEERING (MS, ME)
MATERIALS SCIENCE AND ENGINEERING (MS, PhD) MI
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)

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

SEMICONDUCTOR ENGINEERING (BS)
 Semiconductor Device Engineering
 Semiconductor Process Engineering
 SYSTEMS ENGINEERING (MS, PHD)
 TECHNICAL COMMUNICATION (MS)

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MINORS

(In addition to those designated MI on previous page)

Adaptive Leadership
 Art
 Artificial Intelligence and
 Machine Learning in
 Business
 Automation Engineering
 Bioinformatics
 Business
 Business Analytics & Data Science
 Cognitive Neuroscience
 Communication Studies
 Computational Earth Sciences
 Construction Engineering & Mgmt
 Creative Writing
 Cybersecurity Management and
 Information Assurance
 Digital Supply Chain Mgmt
 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
 Human Factors Psychology
 Ind-Organizational Psych
 Latin American Studies for Technical
 Applications
 Leadership Communication
 Linguistics
 Literature
 Literature and Film
 Management
 Marketing
 Military Aerospace Studies
 Mineral Process Engineering
 Multiculturalism & Diversity
 Music
 Philosophy of Technology

Political Science
 Pre-Law
 Pre-Medicine
 Psychology
 Psychology for Health Care
 Psychology of Leadership
 Quantitative Economics
 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
 Education of Young Children
 Energy Economics
 Environmental Science and Policy
 Explosives Engineering
 Explosives Technology
 Financial Economics and Technology
 Healthcare Psychology
 Human Factors Psychology
 Industrial/Organizational Psychology
 Intercultural Studies
 Logic and the Philosophical Foundations of STEM
 Medicinal Chemistry
 Medieval and Renaissance Studies
 Military and Security Studies
 Neuroscience
 Pre-Law
 Professional Ethics and Moral Reasoning
 Psychology of Diversity and Inclusion
 Russian and Eurasian Studies
 Science, Technology, and Society
 Teaching and Learning

Discipline

Electrical Engineering
 Biological Sciences
 Economics
 Education
 Economics
 Biological Sciences
 Mining Engineering
 Mining Engineering
 Economics
 Psychological Science
 Psychological Science
 Psychological Science
 Multidisciplinary Studies
 Philosophy
 Chemistry
 History
 History
 Psychological Science
 History
 Philosophy
 Psychological Science
 Multidisciplinary Studies
 History
 Education

Technical Writing
Technology, Philosophy, and Ethical Futures
War and Society

Technical Communication
Philosophy
History

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GRADUATE CERTIFICATES

Certificates

Actuarial Science
Advanced Materials for Sustainable Infrastructure
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 Engineering
Digital Supply Chain Management
Electric Machine and Drives
Electrical Power Systems Engineering
Energy Conversion and Transport
Energy Economics and Global Sustainability
Engineering Management
Engineering Mechanics
Enterprise Resource Planning
Entrepreneurship and Technological Innovation
Explosives Engineering
Explosives Technology
Finance
Financial Engineering
Financial Mathematics
Financial Technology, Analytics and Transformation
Foundations of Supply Chain Integration Systems
Geoanalytics and Geointelligence
Geoenvironmental Engineering
Geoenvironmental Science and Engineering
Geologic Hazards
Geophysics
Geotechnical Earthquake Engineering
Geotechnics
Human Factors Psychology
Human Systems Integration
Information System Project Management
Information Systems and Cloud Computing
Infrastructure Renewal
Lean Six Sigma
Management and Leadership
Management for Sustainable Business
Manufacturing Automation
Manufacturing Systems
Military Construction Management
Military Geological Engineering
Mine Reclamation
Mining Engineering
Mining Project Evaluation
Model Based Systems Engineering
Modeling and Simulation for Decision Systems
Nuclear Nonproliferation
Petroleum Systems
Professional Communication
Project Engineering and Construction Management
Project Management
Safety Engineering
Software Design and Development

Discipline

Mathematics
Civil Engineering
Information Science & Technology
Psychological Science
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
Systems Engineering
Information Science & Technology
Electrical Engineering
Electrical Engineering
Aerospace Engineering/Mechanical Engineering
Economics
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
Psychological Science
Engineering Management/Information Science & Technology
Information Science & Technology
Computer Science
Civil Engineering
Engineering Management
Business Administration
Economics
Mechanical Engineering
Manufacturing Engineering
Engineering Management
Geological Engineering
Mining Engineering
Mining Engineering
Mining Engineering
Systems Engineering
Engineering Management
Nuclear Engineering
Geology and Geophysics
Technical Communication
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
Teacher Leadership
Value-Driven Innovation
Wireless Networks and Mobile Systems

Geological Engineering
Mathematics and Statistics
Geological Engineering
Civil Engineering
Mining Engineering
Systems Engineering
Computer Science
Engineering Management
Education
Economics
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
- English BS
- Environmental Science BS
- History BA
- Physics BS
- Psychological Science BA, BS

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