

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 08/02/2024

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)
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)
BIOMEDICAL ENGINEERING (BS)
BUSINESS ADMINISTRATION (MBA)
BUSINESS AND MANAGEMENT SYSTEMS (BS)
 E-commerce
 Enterprise Resource Planning
 Finance
 Human Computer Interaction
 Management Information Systems
 Marketing
 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
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)
 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
 National Security
 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)

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

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

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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
Biomedical Engineering
Business
Business Analytics & Data Science
Cognitive Neuroscience Communication Studies
Construction Engineering & Management
Creative Writing
Cybersecurity Management and Information Assurance
Digital Supply Chain Management
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
Mobile Business and Technology

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
Professional Ethics and Moral Reasoning
Psychology of Diversity and Inclusion
Russian and Eurasian Studies
Science, Technology, and Society
Teaching and Learning
Technical Writing
Technology, Philosophy, and Ethical Futures
War and Society

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
Philosophy
Psychological Science
Multidisciplinary Studies
History
Teacher Education and Certification
Technical Communication
Philosophy
History

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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 Engineering
 Digital Supply Chain Management
 Electric Machine and Drives
 Electrical Power Systems Engineering
 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, Analytics and Transformation
 Foundations of Supply Chain Integration Systems
 Geanalytics and Geointelligence
 Geoenvironmental Engineering
 Geoenvironmental Science and Engineering
 Geologic Hazards
 Geophysics
 Geotechnical Earthquake Engineering
 Geotechnics
 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
 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
 Space Resources
 Statistics
 Subsurface Water Resources

Discipline

Mathematics
 Electrical Engineering
 Materials Science and Engineering
 Civil Engineering
 Mining 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
 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
 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
 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
 Geological Engineering
 Mathematics and Statistics
 Geological Engineering

Surface Water Resources
Sustainability in Mining
Systems Engineering
Systems and Software Architecture
Systems of Human Capital Management
Teacher Leadership
Wireless Networks and Mobile Systems

Civil Engineering
Mining Engineering
Systems Engineering
Computer Science
Engineering Management
Education
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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