

## **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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