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 06/22/2023

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)
Decision Data Analytics
Economics/Business (BS)
Energy Economics
Financial Economics & Tech
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 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 Geophysics (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)
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
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
Quantitative Economics
Russian
Science, Technology & Humanity
Social Media in Industry
Sociology
Spanish
Studio Art
Sustainability
Technical Communication*
Theatre
Writing

* Indicates undergraduate & graduate level minor

Updated 06/15/2023
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<th>Certificates</th>
<th>Discipline</th>
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<td>Actuarial Science</td>
<td>Mathematics</td>
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<td>Advanced Control Systems</td>
<td>Electrical Engineering</td>
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<td>Advanced Engineering Materials</td>
<td>Materials Science and Engineering</td>
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<td>Advanced Materials for Sustainable Infrastructure</td>
<td>Civil Engineering</td>
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<td>Aggregates Management</td>
<td>Mining Engineering</td>
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<td>AI, Machine Learning and Automation in Business</td>
<td>Information Science &amp; Technology</td>
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<td>Applied Workplace Psychology</td>
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<td>Automation Engineering and PLC</td>
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<td>Big Data Management and Analytics</td>
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<td>Building Systems Engineering</td>
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<td>Business Analytics and Data Science</td>
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<td>Business Essentials</td>
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<td>Business Intelligence</td>
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<td>Business Project Management</td>
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<td>CAD/CAM and Rapid Product Realization</td>
<td>Manufacturing Engineering</td>
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<td>Carbon Management Engineering</td>
<td>Chemical Engineering</td>
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<td>Chemical Process Engineering</td>
<td>Aerospace Engineering/Mechanical Engineering</td>
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<td>Composite Materials and Structures</td>
<td>Systems Engineering/Computer Engineering/Computer Science</td>
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<td>Computational Intelligence</td>
<td>Civil Engineering</td>
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<td>Contemporary Structural Engineering</td>
<td>Information Science &amp; Technology</td>
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<td>Control Systems</td>
<td>Mechanical Engineering</td>
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<td>Cyber Physical Systems</td>
<td>Computer Engineering/Systems Engineering</td>
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<td>Cyber Security</td>
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<td>Cybersecurity and Information Assurance Management</td>
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<td>Digital Media and Web Design</td>
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<td>Digital Supply Chain Management</td>
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<td>Electric Machine and Drives</td>
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<td>Electrical Power Systems Engineering</td>
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<td>Electronic and Social Commerce</td>
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<td>Energy Conversion and Transport</td>
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<td>Enterprise Resource Planning</td>
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<td>Entrepreneurship and Technological Innovation</td>
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<td>Explosives Engineering</td>
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<td>Finance</td>
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<td>Foundations of Supply Chain Integration Systems</td>
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<td>Geoanalytics and Geointelligence</td>
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<td>Geoenvironmental Engineering</td>
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<td>Geological Engineering and Geology and Geophysics</td>
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<td>Human-Computer Interaction and User Experience</td>
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<td>Human Factors Psychology</td>
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<td>Human Systems Integration</td>
<td>Engineering Management/Information Science &amp; Technology</td>
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<td>Information Assurance &amp; Security Officer Essentials</td>
<td>Computer Engineering/Computer Science</td>
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<td>Information System Project Management</td>
<td>Information Science &amp; Technology</td>
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<td>Information Systems and Cloud Computing</td>
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<td>Infrastructure Renewal</td>
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<td>Iron and Steel Metallurgy</td>
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<td>Materials for Extreme Environments</td>
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<td>Military Construction Management</td>
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<td>Mining Engineering</td>
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<td>Mine Reclamation</td>
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<td>Mining Project Evaluation</td>
<td>Information Science &amp; Technology</td>
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<td>Mobile Business and Digital Transformation</td>
<td>Systems Engineering</td>
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<td>Model Based Systems Engineering</td>
<td>Engineering Management</td>
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<td>Modeling and Simulation for Decision Systems</td>
<td>Nuclear Engineering</td>
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<td>Nonproliferation</td>
<td>Geology and Geophysics</td>
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<td>Petroleum Systems</td>
<td>Technical Communication</td>
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<td>Professional Communication</td>
<td>Civil Engineering/Engineering Management</td>
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<td>Project Engineering and Construction Management</td>
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<td>Chemical and Biochemical Engineering/Engineering Management</td>
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<td>Software Design and Development</td>
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<td>Surface Water Resources</td>
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<td>Systems and Software Architecture</td>
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<td>Systems of Human Capital Management</td>
<td>Engineering Management</td>
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<tr>
<td>Wireless Networks and Mobile Systems</td>
<td>Computer Science</td>
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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
- Environmental Science BS
- History BA
- Physics BS
- Psychology BA, BS

Updated 05/18/2023

Updated 06/15/2023