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 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/Commerce
  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)
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

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

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<table>
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<th>Certificate</th>
<th>Discipline</th>
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<td>Advanced Control Systems</td>
<td>Electrical Engineering</td>
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<td>Advanced Engineering Materials</td>
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<td>Advanced Materials for Sustainable Infrastructure</td>
<td>Mining Engineering</td>
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<td>Aggregates Management</td>
<td>Information Science &amp; Technology</td>
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<td>AI, Machine Learning and Automation in Business</td>
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<td>Applied Workplace Psychology</td>
<td>Electrical Engineering</td>
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<td>Automation Engineering and PLC</td>
<td>Computer Science</td>
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<td>Big Data Management and Analytics</td>
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<td>Big Data Management and Security</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>
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<td>Composite Materials and Structures</td>
<td>Aerospace Engineering/ Mechanical Engineering</td>
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<td>Computational Intelligence</td>
<td>Systems Engineering/Computer Engineering/Computer Science</td>
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<td>Contemporary Structural Engineering</td>
<td>Civil Engineering</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>
<td>Computer Science</td>
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<td>Cybersecurity and Information Assurance Management</td>
<td>Information Science &amp; Technology</td>
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<td>Digital Engineering</td>
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<td>Digital Supply Chain Management</td>
<td>Information Science &amp; Technology</td>
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<td>Electric Machine and Drives</td>
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<td>Aerospace Engineering/ Mechanical Engineering</td>
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<td>Energy Conversion and Transport</td>
<td>Engineering Management</td>
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<td>Aerospace Engineering/ Mechanical Engineering</td>
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<td>Information Science &amp; Technology</td>
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<td>Enterprise Resource Planning</td>
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<td>Geotechnical Earthquake Engineering</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>
<td>Civil Engineering</td>
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<td>Lean Six Sigma</td>
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<td>Management and Leadership</td>
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<td>Manufacturing Automation</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>Military Geological Engineering</td>
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<td>Mining Project Evaluation</td>
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<td>Model Based Systems Engineering</td>
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<td>Modeling and Simulation for Decision Systems</td>
<td>Engineering Management</td>
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<td>Nuclear Nonproliferation</td>
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<td>Professional Communication</td>
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<td>Project Engineering and Construction Management</td>
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<td>Chemical and Biochemical Engineering Management</td>
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<td>Software Design and Development</td>
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<td>Space Resources</td>
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<td>Subsurface Water Resources</td>
<td>Geological Engineering</td>
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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

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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