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 03/09/2018

AEROSPACE ENGINEERING (BS, MS, PhD) MI
APPLIED AND ENVIRONMENTAL BIOLOGY (MS)
APPLIED MATHEMATICS (BS, MS) MI
  Actuarial Science (BS)
  Algebra (MS)
  Algebra/Discrete Mathematics (BS)
  Applied Analysis
  Computational Mathematics
  Secondary Education (BS)
  Statistics
ARCHITECTURAL ENGINEERING (BS)
  Construction Eng & Project Mgt
  Construction Materials
  Environmental Systems for Buildings
  Structural Engineering
BIOLOGICAL SCIENCES (BA, BS) MI
  Pre-Medicine (BA)
  Secondary Education (BA)
BUSINESS AND MANAGEMENT SYSTEMS (BS)
  E-commerce
  Enterprise Resource Planning
  Finance
  Human Computer Interaction
  Management Information Systems
  Marketing
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) MI
  Economics/Business (BS)
  Secondary Education (BA)
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 (BA)
  Secondary Education
ENVIRONMENTAL ENGINEERING (BS, MS)
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)
  Geophysics (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
  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)
NUCLEAR ENGINEERING (BS, MS, PhD, DE) MI
PETROLEUM ENGINEERING (BS, MS, PhD, DE) MI
PHILOSOPHY (BS) MI
  Applied Physics (BS)
  Geophysics (BS)
  Secondary Education (BS)
PSYCHOLOGY (BA, BS) MI
  Cognitive Neuroscience
  Human Resources/Personnel
  Human Services
  Psychology of Leadership
  Secondary Education (BA, BS)
  Usability of Technology
SYSTEMS ENGINEERING (MS, PhD)
TECHNICAL COMMUNICATION (BS, MS) MI

Updated 03/09/2018
### MINORS
(In addition to those designated MI on previous page)

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<tr>
<th>Discipline</th>
<th>Minor</th>
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<td>Adaptive Leadership</td>
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<td>American Studies</td>
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<td>Art</td>
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<td>Artificial Intelligence and Machine Learning in Business</td>
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<td>Automation Engineering</td>
<td>Geology</td>
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<td>German</td>
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<td>Business Analytics &amp; Data Science</td>
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<td>Business Applications and Software Development</td>
<td>Human-Computer Interaction &amp; User Experience</td>
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<td>Cognitive Neuroscience</td>
<td>Humanitarian Engineering and Science</td>
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<td>Communication Studies</td>
<td>Ind/Organizational Psych</td>
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<td>Creative Writing</td>
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<td>Cybersecurity Management and Information Assurance</td>
<td>Latin American Studies for Technical Applications</td>
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<td>Leadership Communication</td>
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<td>Literature</td>
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<td>Energy Technology</td>
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<td>Mineral Process Engineering</td>
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<td>Film and Literature</td>
<td>Mobile Business and Technology</td>
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<td>Multiculturalism &amp; Diversity</td>
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<td>Russian</td>
<td>Science, Technology &amp; Humanity</td>
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<td>Social Media in Industry</td>
<td>Sociology</td>
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<td>Studio Art</td>
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<td>Sustainability</td>
<td>Technical Communication*</td>
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<td>Theatre</td>
<td>Writing</td>
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* Indicates undergraduate & graduate level minor

Updated 04/30/2018

### UNDERGRADUATE CERTIFICATES

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<th>Certificate</th>
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<tbody>
<tr>
<td>Explosives Engineering</td>
<td>Mining &amp; Nuclear Engineering</td>
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<tr>
<td>Explosives Technology</td>
<td>Mining &amp; Nuclear Engineering</td>
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<td>Technical Writing</td>
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Updated 10/25/2012

### GRADUATE CERTIFICATES

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<th>Certificate</th>
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<tr>
<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>AI, Machine Learning and Automation in Business</td>
<td>Information Science and 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>
<td>Computer Science</td>
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<td>Big Data Management and Security</td>
<td>Computer Science</td>
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<td>Business Analytics and Data Science</td>
<td>Information Science &amp; Technology</td>
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<td>Business Essentials</td>
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<td>Business Intelligence</td>
<td>Information Science &amp; Technology</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>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>Civil Engineering</td>
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<td>Control Systems</td>
<td>Mechanical 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 and Technology</td>
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<tr>
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<td>Information Science &amp; Technology</td>
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<td>Information Science &amp; Technology</td>
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<td>Electric Machine and Drives</td>
<td>Electrical Engineering</td>
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<td>Electrical Power Systems Engineering</td>
<td>Electrical Engineering</td>
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<tr>
<td>Electronic and Social Commerce</td>
<td>Information Science &amp; Technology</td>
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<td>Energy Conversion and Transport</td>
<td>Aerospace Engineering/Mechanical Engineering</td>
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<td>Engineering Management</td>
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<td>Engineering Mechanics</td>
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<td>Entrepreneurship and Technological Innovation</td>
<td>Business Administration</td>
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<td>Financial Engineering</td>
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<tr>
<td>Geoenvironmental Engineering</td>
<td>Civil Engineering</td>
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</table>
Geotechnical Earthquake Engineering  Civil Engineering
Geotechnics  Geotechnics
Human-Computer Interaction and User Experience  Information Science & Technology
Human Systems Integration  Engineering Management/Information Science & Technology
Information Assurance & Security Officer Essentials  Computer Engineering/Computer Science
Information System Project Management  Information Science & Technology
Information Systems and Cloud Computing  Computer Science
Infrastructure Renewal  Civil Engineering
Lean Six Sigma  Engineering Management
Management and Leadership  Business Administration
Management for Sustainable Business  Economics
Manufacturing Automation  Mechanical Engineering
Manufacturing Systems  Manufacturing Engineering
Military Construction Management  Engineering Management
Military Geological Engineering  Geological Engineering
Mining Engineering  Mining Engineering
Mobile Business and Technology  Information Science & Technology
Model Based Systems Engineering  Systems Engineering
Network Centric Systems  Computer Engineering/Systems Engineering
Project Engineering and Construction Management  Civil Engineering/Engineering Management
Project Management  Engineering Management
Safety Engineering  Chemical and Biochemical Engineering/Engineering Management
Software Design and Development  Computer Science
Statistical Methods in Psychology  Mathematics and Statistics/Psychology
Statistics  Mathematics and Statistics
Systems Engineering  Systems Engineering
Systems and Software Architecture  Computer Science
Technical Communication  Technical Communication
Wireless Networks and Mobile Systems  Computer Science

Updated 04/30/2018

TEACHER CERTIFICATION PROGRAMS

Secondary Education Certification  Elementary Education Certification
- Applied Mathematics BS  - Multidisciplinary Studies BA
- Biological Sciences BA
- Chemistry BA
- Economics BA
- English BA
- History BA
- Physics BS
- Psychology BA, BS

Updated 02/04/2015