

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 04/17/2019

AEROSPACE ENGINEERING (BS, MS, PhD) MI
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, MS) MI
 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) 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 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
 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
PHYSICS (BS, MS, MST, PhD) 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

MINORS

(In addition to those designated MI on previous page)

Adaptive Leadership	Finance	Multiculturalism & Diversity
American Studies	Financial Technology	Music
Art	French	Philosophy of Technology
Artificial Intelligence and Machine Learning in Business	Game Studies	Political Science
Automation Engineering	Geology	Pre-Law
Bioinformatics	German	Pre-MBA
Biomedical Engineering	Global Studies	Pre-Medicine
Business	Global Sustainable Economics	Psychology for Health Care
Business Analytics & Data Science	Human-Computer Interaction & User Experience	Psychology of Leadership
Business Applications and Software Development	Humanitarian Engineering and Science	Psychometrics
Cognitive Neuroscience	Ind/Organizational Psych	Russian
Communication Studies	International Economics	Science, Technology & Humanity
Construction Engineering & Management	Latin American Studies for Technical Applications	Social Media in Industry
Creative Writing	Leadership Communication	Sociology
Cybersecurity Management and Information Assurance	Linguistics	Spanish
Digital Supply Chain Management	Literature	Studio Art
Electronic and Social Commerce	Literature and Film	Sustainability
Energy Technology	Management	Technical Communication*
Enterprise Resource Planning	Marketing	Theatre
Entrepreneurship	Military Aerospace Studies	Writing
Ethics	Mineral Process Engineering	
Explosives Engineering *	Mobile Business and Technology	
Film and Literature		

* Indicates undergraduate & graduate level minor
Updated 07/07/2020

UNDERGRADUATE CERTIFICATES

Certificate

Automation Engineering
Bioinnovation
Explosives Engineering
Explosives Technology
Technical Writing

Discipline

Electrical Engineering
Biological Sciences
Mining & Nuclear Engineering
Mining & Nuclear Engineering
Technical Communication

Updated 07/07/2020

GRADUATE CERTIFICATES

Certificates

Actuarial Science
Advanced Control Systems
Advanced Engineering Materials
AI, Machine Learning and Automation in Business
Applied Workplace Psychology
Automation Engineering and PLC
Big Data Management and Analytics
Big Data Management and Security
Business Analytics and Data Science
Business Essentials
Business Intelligence
Business Project Management
CAD/CAM and Rapid Product Realization
Composite Materials and Structures
Computational Intelligence
Contemporary Structural Engineering
Control Systems
Cyber Physical Systems
Cyber Security
Cybersecurity and Information Assurance Management
Digital Media and Web Design
Digital Supply Chain Management
Electric Machine and Drives
Electrical Power Systems Engineering
Electronic and Social Commerce
Energy Conversion and Transport
Engineering Management
Engineering Mechanics
Enterprise Resource Planning
Entrepreneurship and Technological Innovation

Discipline

Mathematics
Electrical Engineering
Materials Science and Engineering
Information Science & Technology
Psychology
Electrical Engineering
Computer Science
Computer Science
Information Science & Technology
Business Administration
Information Science & Technology
Business Administration
Manufacturing 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
Information Science & Technology
Information Science & Technology
Electrical Engineering
Electrical Engineering
Information Science & Technology
Aerospace Engineering/Mechanical Engineering
Engineering Management
Aerospace Engineering/Mechanical Engineering
Information Science & Technology
Business Administration

Explosives Engineering
 Explosives Technology
 Finance
 Financial Engineering
 Financial Mathematics
 Financial Technology
 Geanalytics and Geointelligence
 Geoenvironmental Engineering
 Geoenvironmental Science and Engineering
 Geologic Hazards
 Geophysics
 Geotechnical Earthquake Engineering
 Geotechnics
 Human-Computer Interaction and User Experience
 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
 Mining Engineering
 Mobile Business and Technology
 Model Based Systems Engineering
 Nuclear Nonproliferation
 Petroleum Systems
 Project Engineering and Construction Management
 Project Management
 Safety Engineering
 Software Design and Development
 Space Resources
 Statistical Methods in Psychology
 Statistics
 Subsurface Water Resources
 Systems Engineering
 Systems and Software Architecture
 Technical Communication
 Wireless Networks and Mobile Systems

Explosives Engineering
 Explosives Engineering
 Business Administration
 Engineering Management/Systems Engineering
 Mathematics
 Business Administration
 Geological Engineering
 Civil Engineering
 Geological Engineering and Geology and Geophysics
 Geological Engineering
 Geology and Geophysics
 Civil Engineering
 Geotechnics
 Information Science & Technology
 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
 Information Science & Technology
 Systems Engineering
 Nuclear Engineering
 Geology and Geophysics
 Civil Engineering/Engineering Management
 Engineering Management
 Chemical and Biochemical Engineering/Engineering Management
 Computer Science
 Geological Engineering
 Mathematics and Statistics/Psychology
 Mathematics and Statistics
 Geological Engineering
 Systems Engineering
 Computer Science
 Technical Communication
 Computer Science

Updated 07/07/2020

TEACHER CERTIFICATION PROGRAMS

Elementary Education Certification
 - Multidisciplinary Studies BA

Middle School Education Certification
 -Multidisciplinary Studies BA
 -Business
 -English Language Arts
 -Mathematics
 -Science
 -Social Studies

Secondary Education Certification
 -Applied Mathematics BS
 -Biological Sciences BA
 -Business and Management Systems BS
 -Chemistry BA
 -Economics BA
 -English BA
 -History BA
 -Physics BS
 -Psychology BA, BS

Updated 08/05/2020