

# Obtain two graduate certificates and your master's in Systems Engineering

At Missouri S&T, it is possible to obtain two graduate certificates as part of your master's degree track in Systems Engineering. The sequence of required course curriculum in each emphasis area is listed below.

## CYBER PHYSICAL SYSTEMS EMPHASIS

SYS ENG 5101 Systems Engineering and Analysis  
SYS ENG 6102 Information Based Design  
SYS ENG 6103 Systems Life Cycle Costing  
SYS ENG 6104 Systems Architecting

**Receive Systems Engineering Graduate Certificate**

SYS ENG 6321 Modeling Complex Systems  
COMP ENG 5410 Introduction to Computer  
Communication Networks  
SYS ENG 5323 Wireless Networks  
SYS ENG 6322 Resilient Networks

**Receive Network Centric Graduate Certificate**

SYS ENG 6542 Model Based Systems Engineering  
SYS ENG 6196 Systems Engineering Capstone

**Receive Master of Science in Systems Engineering**

## ENGINEERING MANAGEMENT EMPHASIS

SYS ENG 5101 Systems Engineering and Analysis  
SYS ENG 6102 Information Based Design  
SYS ENG 6103 Systems Life Cycle Costing  
SYS ENG 6104 Systems Architecting

**Receive Systems Engineering Graduate Certificate**

ENG MGT 5320 Project Management  
ENG MGT 5111 Management for Engineers  
ENG MGT 6211 Advanced Financial Management  
ENG MGT 5412 Operations Management Science

**Receive Engineering Management Graduate Certificate**

SYS ENG 6196 Systems Engineering Capstone  
SYS ENG 6542 Model Based Systems Engineering

**Receive Master of Science in Systems Engineering**



## PROJECT MANAGEMENT EMPHASIS

SYS ENG 5101 Systems Engineering and Analysis  
SYS ENG 6102 Information Based Design  
SYS ENG 6103 Systems Life Cycle Costing  
SYS ENG 6104 Systems Architecting

**Receive Systems Engineering Graduate Certificate**

ENG MGT 5320 Project Management  
ENG MGT 6322 Case Studies in Project Management  
ENG MGT 6323 Global Project Management  
ENG MGT Elective: Contact your advisor(s) for alternative course

**Receive Project Management Graduate Certificate**

SYS ENG 6196 Systems Engineering Capstone  
SYS ENG 6542 Model Based Systems Engineering

**Receive Master of Science in Systems Engineering**

## FINANCIAL ENGINEERING EMPHASIS

SYS ENG 5101 Systems Engineering and Analysis  
SYS ENG 6102 Information Based Design  
SYS ENG 6103 Systems Life Cycle Costing  
SYS ENG 6104 Systems Architecting

**Receive Systems Engineering Graduate Certificate**

ENG MGT 6212 Investment  
ENG MGT 6213 Financial Engineering  
ENG MGT 6214 Financial Engineering II  
ENG MGT 6215 Financial Risk Management

**Receive Financial Engineering Graduate Certificate**

SYS ENG 6196 Systems Engineering Capstone  
SYS ENG 6542 Model Based Systems Engineering

**Receive Master of Science in Systems Engineering**

## COMPUTATIONAL INTELLIGENCE ENGINEERING EMPHASIS

SYS ENG 5101 Systems Engineering and Analysis  
SYS ENG 6102 Information Based Design  
SYS ENG 6103 Systems Life Cycle Costing  
SYS ENG 6104 Systems Architecting

**Receive Systems Engineering Graduate Certificate**

SYS ENG 5211 Computational Intelligence  
SYS ENG 5212 Introduction to Neural Networks and Applications S  
YS ENG 6213 Deep Learning and Advanced Neural Networks  
SYS ENG Elective: Contact your advisor(s) for alternative course

**Receive Computational Intelligence Engineering Graduate Certificate**

SYS ENG 6196 Systems Engineering Capstone  
SYS ENG 6542 Model Based Systems Engineering

**Receive Master of Science in Systems Engineering**

## MODEL BASED SYSTEMS ENGINEERING EMPHASIS

SYS ENG 5101 Systems Engineering and Analysis  
SYS ENG 6102 Information Based Design  
SYS ENG 6103 Systems Life Cycle Costing  
SYS ENG 6104 Systems Architecting

**Receive Systems Engineering Graduate Certificate**

SYS ENG 6239 Smart Engineering System Design  
SYS ENG 6110 Risk Modeling and Optimization under Uncertainty  
SYS ENG 6412 Mathematical Programming

SYS ENG Elective: Contact your advisor(s) for alternative course

**Receive Model Based Systems Engineering Graduate Certificate**

SYS ENG 6196 Systems Engineering Capstone  
SYS ENG 6542 Model Based Systems Engineering  
**Receive Master of Science in Systems Engineering**

## CONTACT INFORMATION

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