Discover how risk analysis, management principles and techniques can be applied to engineering projects.

COURSE HIGHLIGHTS
• Introduction to risk and reliability
• Risk assessment and risk management
• Uncertainty concept
• Review of probability theories
• Analytical techniques in uncertainty analysis
• Safety factor and safety margin
• Reliability index
• Reliability analysis of complex systems
• Monte-Carlo simulation
• Hit and Miss method
• Variance reduction techniques

COURSE LEARNING OUTCOMES
• Identify information sources and risks for engineering projects.
• Identify and develop a plan for managing risks and opportunities.
• Use statistical methods to analyze empirical data and develop a risk-based simulation model.
• Use simulation and Engineering Reliability techniques to predict the occurrence of failures of engineering projects.
• Implement a risk management framework including risk identification, risk evaluation in conjunction with uncertainty analysis.
• Ability to apply knowledge of science and engineering fundamentals for risk assessment.

COURSE AT-A-GLANCE

<table>
<thead>
<tr>
<th>FORMAT</th>
<th>Online</th>
</tr>
</thead>
<tbody>
<tr>
<td>DURATION</td>
<td>1 Quarter</td>
</tr>
<tr>
<td>ESTIMATED COST</td>
<td>$775</td>
</tr>
</tbody>
</table>

LEARN MORE
UC San Diego Extension
Data Science and Engineering
(858)534-1566
unexengr@ucsd.edu

ENROLL TODAY
extension.ucsd.edu/Optimization-Analysis