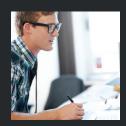
RISK MANAGEMENT CFRTIFICATE

Program Overview: This certificate is designed to equip students with skills and strategies to manage risks in a variety of settings. An emphasis is placed on engineering and industry applications of risk engineering practices



CE 8580 Fundamentals of Risk Engineering: Measures of risk, vulnerability, and consequence; qualitative and quantitative methods for risk analysis and estimation; consequence models; risk communication and acceptance criteria; and treatment and management of risk. Focus on concepts, theories, and applications for risk engineering and management.



CE 8560 Human Factors in Risk Engineering: Overview of theories in sensation, perception, cognition and motor control of humans related to the design of systems; application of theories to risk engineering and human reliability assessments in order to reduce risk within systems and environments.



CE 8470 Optimization Support Systems:

Development of optimization models to aid in complex decision-making and risk mitigation. Risk measures of basic stochastic and robust optimization models. Soft constraints to measure risk. Implementation of models in software systems within decision support systems.



CE 8490 Enterprise Risk Analytics:

Study of enterprise risk-management (ERM); ERM process; ERM frameworks including cooperate governance, line management, portfolio management, risk transfer, and risk analytics; ERM applications including: credit, market and operations within business and financial institutions; ERM implementation.





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