

Department of Mathematics
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Course	Course Name : Introduction to Risk Analysis
	Course Code : KM184823
	Credit : 2
	Semester : 8

Description of Course	
<p>This course presents the basics of risk theory, uncertainty, opportunity, opportunity distribution, statistical data, data matching, aggregate distribution, forecasting with uncertainty, correlation modeling, copula, optimization in risk analysis. Presentation of related theories accompanied by discussion of application in the field of insurance and some other fields such as risks to the project, food safety assessment and imported goods.</p>	
Learning Outcome	
PLO 2	[C3] Students are able to solve simple and practical problems by applying basic mathematical statements, methods and computations
PLO 3	[C4] Students are able to analyze simple and practical problems in at least one field of analysis, algebra, modeling, system optimizations and computing sciences
PLO 5	[C3] Students are able to make use of the principles of long life learning to improve knowledge and current issues on mathematics
Course Learning Outcome	
<ol style="list-style-type: none"> 1. Students are able to explain concept and methodology in risk analysis theory 2. Students recognize risk models in insurance and other fields. 3. Students are able to use risk models to analyze a risk in insurance and other fields. 	

4. Students are able to present the results of the analysis using the methods studied for simple problems.

Main Subject

Definition of risk and risk analysis, uncertainty, opportunity, opportunity distribution, statistical data, data matching, Bayesian inferencing, aggregate distribution, and its application to projects, insurance and finance.

Prerequisites

Statistical Methods
Probability Theory

Reference

1. Quantitative Risk Analysis, David Vose, Wiley, 2009

Supporting Reference

1. Probability and Risk Analysis, Igor Rychlik and Jesper Ryden, Springer, 2006