COURSE DETAIL

INTRODUCTION TO RISK AND RELIABILITY ANALYSIS

Country
Norway

Host Institution
University of Oslo

Program(s)
University of Oslo

UCEAP Course Level
Upper Division

UCEAP Subject Area(s)
Statistics Mathematics

UCEAP Course Number
109

UCEAP Course Suffix

UCEAP Official Title
INTRODUCTION TO RISK AND RELIABILITY ANALYSIS

UCEAP Transcript Title
RISK & RELIABILITY

UCEAP Quarter Units
8.00

UCEAP Semester Units
5.30

Course Description

This course provides the probability theoretical basis for calculating the reliability of a system. This means the likelihood that a system functions when the reliability of the individual components the system consists of is known. Examples of systems are energy systems and networks. The course also deals with various examples of risk analysis in industrial applications. The course subject is illustrated by various simulation techniques. The course discusses topics including what coherent systems are, and how to represent such systems by paths and cuts; how to compute the reliability for systems of components; what discrete event simulations is, and how to apply different simulation techniques to do computations related to risk and reliability analysis; how to compute the reliability importance of components; and how to perform a risk and reliability analysis in various practical situations. This course is an introduction to more advanced studies, but is also suitable as an aid subject in other professional circles and as further and postgraduate education for realists and engineers.

Language(s) of Instruction

English

Host Institution Course Number

STK3405

Host Institution Course Title

INTRODUCTION TO RISK AND RELIABILITY ANALYSIS

Host Institution Course Details

Host Institution Campus

Mathematics and Natural Sciences

Host Institution Faculty

Host Institution Degree

Host Institution Department

Mathematics

Course Last Reviewed

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