

E-MTOM400 Industrial assets, decisions, and Performance

Short summary

The course covers the underlying principles, theories, and practices related to modern industrial assets, decisions and performance in complex industrial systems in both public and private sectors. The course specially focuses on the characteristics of assets and decisions in modern industrial environments, and how complex decision settings influence different types of scenarios and visa-versa. It covers issues related to (a) Introduction, Modern challenges, and Emerging trends (b) Diverse paradigms for Industrial decisions and performance (c) Decision and Performance uncertainties in modern evolving industrial contexts, and (d) Popular methods and techniques for modern performance management. The course in general provides a good theoretical insight as well as understanding on various practical use through Industrial cases and examples.

Content

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Learning outcome

Core knowledge on various challenges and solutions in dealing with industrial decisions and performance management processes. Different perspectives that can help guide to balance various technical and non-technical aspects for different decisions and performance management practices in complex industrial systems. An exposure to the use of selected methods and frameworks in practical settings.

After having taken this course the student should have the following knowledge, skills and general competence:

Kunnskap/Knowledge

- Understanding and knowledge about modern industrial assets, their decision settings, and performance challenges
- Understanding the implicit and explicit complexities in modern environments in making risk conscious decisions and transforming it to drive performance
- Knowledge about decision bases as well as principles, frameworks, and methods to manage industrial performance
- Knowledge and understanding about the use various performance measures
- Criteria for establishing an effective performance management system to support decisions in modern Industrial assets.

Ferdigheter/Skills

- Use of principles and suitable criteria for risk-informative decisions and managing performance of modern industrial assets
- Use of different methods and techniques to develop performance management systems
- Evaluate and define suitable performance indicators

Generell kompetanse/General competence

- Importance of new thinking and new practices to resolve modern challenges relating to Industrial assets, decisions, and performance.
- Awareness of uncertainties and risk associated decisions and performance in modern industrial contexts.
- Critical review of industrial assets and systems w.r.t. growth, strategies, and performance profiles.

STUDENTEV - Emneevaluering - Studentsider

Standard forms and/or discussions

Vurdering tilleggstekst

Final assessment is based on Written reports for each Module separately, with equal weights on the Final grade.

Obligatoriske undakt. tilleggstekst

Reports and Presentations for each Course Module, based on Individual or Group work.

Method of work

Lectures, Interactive discussions, Reports and Presentations based on Individual / Group work.

Lectures will be held in English language.

Litteratur/pensum Leganto

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