II2300 Processer för produktrealisering I 7,5 hp

Product Realization Processes I

Fastställande

Kursplan för II2300 gäller från och med VT19

Betygsskala

A, B, C, D, E, FX, F

Utbildningsnivå

Avancerad nivå

Huvudområden

Elektroteknik

Särskild behörighet

Undervisningsspråk

Undervisningsspråk anges i kurstillfällesinformationen i kurs- och programkatalogen.

Lärandemål

Product Realization Processes is a two part course. The first part covers processes, skills and technologies leading to the realization of ICT products

intended for the commercial marketplace. Students will become familiar with idea generation, product design, prototyping methods and the steps necessary to show that a potential product can be commercially viable. In addition to the technical aspects of product realization, project processes and methods are also covered. Students will acquire skills for working with and managing groups of technical contributors, and processes for the effective application of technology development in a business environment. These include understanding and working with business components such as marketing, and management.

- **To know how to describe and perform all required steps to visualize, model and develop an ICT product.**
- **To know how to lead innovation and idea generation sessions. To be able to describe and use methods to derive maximum output from such sessions.**
- **To know how to quantitatively analyze business forces on ICT product realization. This includes using cost analysis, customer analysis and resource constraints that involve human resources, material and time.**

Kursinnehåll

- **Idea generation, brainstorming processes and team consensus building**
- **Product visualization, modeling and prototyping techniques**
- **Consensus building outside the engineering team**
- **Business processes for product development**
- **Cost Analysis**
- **Customer analysis and marketing**
- **Technical project management**
- **Resource management of human, material, money and time**
- **Effective communication**
- **Dealing with failure. Failure analysis, constructively moving forward**
- **Building on success for continued product and group progress**

Kurslitteratur

The required textbook for this course is:

"Product Design and Development" by Karl T. Ulrich and Steven D. Eppinger, 4th edition, McGraw-Hill, 2007

Examination

- INL1 - Inlämningsuppgifter, 4,5 hp, betygsskala: A, B, C, D, E, FX, F
- TEN1 - Tentamen, 3,0 hp, betygsskala: A, B, C, D, E, FX, F

Examinator beslutar, baserat på rekommendation från KTH:s handläggare av stöd till studenter med funktionsnedsättning, om eventuell anpassad examination för studenter med dokumenterad, varaktig funktionsnedsättning.

Examinator får medge annan examinationsform vid omexamination av enstaka studenter.

När kurs inte längre ges har student möjlighet att examineras under ytterligare två läsår.

Passed written exam TEN1: 3 hp, Grade A-F__Problem assignments INL1: 4,5 hp, Grade A-F__The grade for the course is calculated as a weighted average where the grade E-A are given a value of 1-5. Round__halfs up.

Etiskt förhållningssätt

- Vid grupparbete har alla i gruppen ansvar för gruppens arbete.
- Vid examination ska varje student ärligt redovisa hjälp som erhållits och källor som använts.
- Vid muntlig examination ska varje student kunna redogöra för hela uppgiften och hela lösningen.