ID130V Modern PLC-program-ming 6.0 credits

Modern PLC-programmering

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for ID130V valid from Autumn 2008

Grading scale

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

Education cycle

First cycle

Main field of study

Information Technology, Technology

Specific prerequisites

Some experience with use of PC and Windows and programming in C, Pascal or similar

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

The participants of the course shall at the conclusion of the course have knowledge of how to:

Describe the background and the work methodology with modern programming of PLC (Programmable Logic Control), with the help of the standard IEC 61131-3.-from a verbal specification, the program will be specified closer with Sequence Function Chart (GRAFCET). After that, coding shall be done in an optional sublanguage (any of the five types available).

Course contents

Orientation of Petri-network.
Batch control.
Programming in real time.
Standards of sequence function chart.
The language IEC61131-3
Program structure
SFC-language (sequence function chart)
FBD (function block)
LD (relae ladder diagram)
IL (instruction list for PLC)
ST (structured text)Programming of digital functions
Programming of analog functions
Orientation about communication between PLC and main system (IEC61131-5).

Course literature

IEC 61131-3
Programming Metholodogy,
Bonfatti - Monari - SampieriUpplaga:
Förlag: CJ International, France
År: 2006 ISBN: 0-97346770-0-

ISBN 0-9734670-0-2
Bonfatti - Monari - Sampieri:
IEC 61131-3 Programming Methodology
Förlag: CJ International, France

Examination

• ÖVN1 - Exercises, 3.0 credits, grading scale: P, F

• LAB1 - Laboratory Works, 3.0 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

Other requirements for final grade

Exercises (EXC1, 4.5 cr) Laboratory experiments (LAB1, 4.5 cr)   **Grading scale:** A/B/C/D/E/Fx/F

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.