

COURSE ANALYSIS, postgraduate course

Third cycle courses, EECS School, KTH , from 2018

An asterix (*) denotes non-compulsory data.

Course data

Course name	Modulation of Power Electronic Converters
Course ID	EJ2311
Credits	6
Credits per module	
Time period for course	3
Teachers	Staffan Norrga (6 Lectures, Written exam, Course Responsible, Examiner),
Examiner	Hans-Peter Nee (2 lectures) Tim Augustin (Tutorials, Computer Exercises, Lab)
Classroom hours	18 (Lect), 6 Computer, Assignments, 12 Tut, 4 Lab
Nr of registered students	26 (2018-2019)
Examination rate, in %	after first exam 64% after second exam 82%

Goals

Global course goals	The purpose of the course is to provide a solid working understanding of modern synthesis and analysis methods of modulation for voltage source converters.
How the course design helps fulfill these goals	Computer exercises and tutorials are designed to convey understanding of the topic. Written exam to follow up (no grading, only pass /fail).

Pedagogical development - I

Changes made since previous time course was given	On-time correct completion of CA now give 1 bonus point on the written exam. Change of TA (improvement).
--	--

Course evaluation; comments from students

Based on the anonymous questionnaire.

Evaluation response rate	46% (12/24)
Overall student view*	4.42/5
Positive comments	(What was best with the course?) “The lectures and the contents” “Matlab library” “That really features modulation of power converters and the real life applications.” “the book and the TA's explanations” “The materials are good enough to understand the course contain.”
Negative comments	(What was worst with the course?) “Exam seems to ask a bit different concepts” “Tutorials” “The exam is quite unexpected, could be totally different from the course preparation.” “the exam”
Pre-knowledge, comments*	“I did not take the basic course on Power Electronics but it went fine for me anyway”

Course design, comments*	
Literature, comments	<p>“The materials are good enough to understand the course contain.”</p> <p>“the slides on AC machines losses were messy compared to the others”</p>
Examination, comments	<p>“The exam featured questions related to the course but it was far different from the exercises made in the tutorials.”</p> <p>“the exam focuses sometimes on things that we did not deeply covered in courses or even not at all like the implementation of algorithms on hardware”</p> <p>(This is my best suggestion regarding future improvements of the course)</p>
Particularly interesting* comments	<p>“More exam-like exercise”</p> <p>“Make proper exercises in the tutorials, some that are more like the exam.”</p> <p>“transform it into a project course, with more important assignments and without the exam that really does not teach things that we will remember afterwards.”</p> <p>“doing the course evaluation on time to reflect the thoughts freshly”</p>

Course teacher's impressions from the evaluation

Comments	Overall positive feedback. Some students are disappointed by the correlation between the written exam and the other course activities.
-----------------	--

Course teacher's summary

Overall view	Generally positive
Positive comments	Content, lectures
Negative comments	Written exam results still unsatisfactory. Some students unable to prepare properly.
View on pre-knowledge*	Mostly seems satisfactory, with some exceptions
View on course design*	
View on course material	Mostly good, negative comment on electric machine lecture notes.
View on examination	Complaints that it does not correlate with tutorial problems.

Pedagogical development - II

Outcome of course changes made since last time course was given	More efficient execution of computer assignments thanks to bonus points at exam for timely completion (fewer iterations). Pedagogical outcome uncertain however.
Changes to be made before next time course is given	More solved problems to be made available to students, will allow them to prepare for exam better.

Other

Comments*	
------------------	--