

FBB3080 Computational nanophotonics / Nanofotonik beräkningar

2012, February to March

Basic 7,5 hp

Local for lectures and laboratory work: **RB15**, Roslagstullsbacken 15, Albanova University Center (<http://www.theochem.kth.se/contact/>)

time		Preparation and lecture/lab content	Lecture & Lab	Home assignment
v6	08/02, 10:00-11:45	General introduction	Lecture 1	Home assignment 1: Read Chapter 1 of FBB3080a.pdf
	09/02, 10:00-11:45	Electron in nano	Lecture 2	Home assignment 2: Get known the computer codes of home_assignmene_2.pdf
v7	15/02, 10:00-11:45	Light-matter interaction. Read Chapter 2 of FBB3080a.pdf	Lecture 3	
	16/02, 10:00-11:45	Superlattices and Microstructures, vol.30, p.69, 2001	Lecture 4. Laboratory work 1	Compute photocurrent of quantum well infrared photodetector
v8	22/02, 10:00-11:45	QD Biomarker Read Chapter 3 of FBB3080b.pdf	Lecture 5	Home assignment 3 FBB3080a.pdf, p.49-50 Find eA/P for solar radiation
	23/02, 10:00-11:45	QD-based solar cell: MEG	Lecture 6	Home assignment 4
v9	29/02, 10:00-11:45	Introduction to plasmonics I	Lecture 7	Read FBB3080c.pdf
	01/03, 10:00-11:45	Introduction to plasmonics II	Lecture 8	Home assignment 5
v10	07/03, 10:00-11:45	Simulation of plasmonic waveguides with Finite-element method	Laboratory work 2	Simulation hands-on practice
	08/03, 10:00-11:45	Plasmonic devices	Lecture 9 Summary	
v13	29/03, 10:00-11:45	Hand in home assignments and lab reports	Written examination	
v36	07/09, 10:00-11:45	Hand in home assignments and lab reports	Written examination	

2012, May

Project 2,5 hp

One computational project will be given for those who wish to continue to the 2,5 hp project. The students have one week for the project. The goal of this project is how to prepare for unpredictable real-world problems.

Deadline for project report: 2012-09-07, kl.12.00