

Linear and integer optimization with applications, MMG631/MVE165, vt 2015

Week	Day	Date	Start	End	Type	No	Room	Contents	Literature/Exercises
v 13	Tisdag	2015-03-24	10:00	11:45	Lecture	#1	Euler	Introduction; course map; modelling optimization applications; graphic solution	Chapters in (i): 1, 2.1-5, 3
	Onsdag	2015-03-25	13:15	14:00	Lecture	#2a	VF	AMPL and CPLEX, Computer exercise on linear programming (Zuzana Šabartová)	
	Onsdag	2015-03-25	14:15	15:00	Lecture	#2b	VF	Supply chain (Assignment 1) (Zuzana Šabartová)	
	Onsdag	2015-03-25	15:15	17:00	Computers booked		F-T4011		
	Torsdag	2015-03-26	10:00	11:45	Problem solving	1	MVF21,26	Exercises on linear optimization modelling	Exercises in (ii): 3.4, 3.6, 3.10
	Fredag	2015-03-27	10:00	11:45	Lecture	#3	Euler	Convexity; basic feasible solution; the simplex method; (self study: degeneracy; unbounded solution; infeasibility; starting solutions)	Chapters in (i): 2.4, 4.1-7, (7.1), 4.8-10
v 14	Tisdag	2015-03-31	10:00	11:45	Lecture	#4	Euler	Linear programming duality; economic interpretation; post-optimal and sensitivity analysis	Chapters in (i): 6, (7.2-5), 5.1-5, (5.6)
	Onsdag	2015-04-01	13:15	15:00	Computers booked		F-T7203		
	Onsdag	2015-04-01	15:15	17:00	Computers booked		F-T4011		
	Torsdag	2015-04-02	10:00	11:45	Problem solving	2	MVF21,26	Exercises on linear optimization theory and algorithms	Exercises in (ii): 4.5, 4.6, 4.13
v 17	Tisdag	2015-04-21	10:00	11:45	Lecture	#5	Euler	Discrete optimization models and applications; complexity	Chapters in (i): 13, 2.6
	Onsdag	2015-04-22	13:15	15:00	Computers booked		F-T7203		
	Onsdag	2015-04-22	15:15	17:00	Computers booked		F-T4011		
	Onsdag	2015-04-22	23:55					<i>Deadline Assignment 1</i>	
	Torsdag	2015-04-23	10:00	11:45	Problem solving	3	MVF21,26	Exercises on linear optimization duality and sensitivity analysis	Exercises in (ii): 5.5, 6.8, 6.10
	Fredag	2015-04-24	10:00	10:45	Lecture	#6a	Euler	Theory and algorithms for discrete optimization models	Chapters in (i): 14.1-3, 15.1-3
	Fredag	2015-04-24	11:00	11:45	Lecture	#6b	Euler	Maintenance scheduling optimization (Assignment 2)	
v 18	Tisdag	2015-04-28	10:00	11:45	Lecture	#7	Euler	Discrete optimization: theory and algorithms	Chapters in (i): 14.4-5, (14.6), 16.1-2, 17.1-2, (17.3-4) 13.10-11, 15.4, (15.5)
	Onsdag	2015-04-29	13:15	15:00	Problem solving	4	MVF21,26	Exercises on integer linear optimization modelling and algorithms	Exercises in (ii): 13.5, 13.6, 15.6
	Onsdag	2015-04-29	15:15	17:00	Computers booked		F-T4011		
	Torsdag	2015-04-30	10:00	11:45	Lecture	#8	VF	Combinatorial optimization theory and algorithms	Chapters in (i): 16, 8.3

Week	Day	Date	Start	End	Type	No	Room	Contents	Literature/Exercises
v 19	Tisdag	2015-05-05	10:00	10:45	Lecture	#9a	Euler	Wind power investment and generation (Assignment 3a)	
	Tisdag	2015-05-05	11:00	11:45	Lecture	#9b	Euler	The traveling salesperson problem (Assignment 3b) (Emil Gustavsson)	
	Onsdag	2015-05-06	13:15	15:00	Computers booked		F-T7203		
	Onsdag	2015-05-06	15:15	17:00	Computers booked		F-T4011		
	Onsdag	2015-05-06	23:55					<i>Deadline Assignment 2</i>	
	Torsdag	2015-05-07	10:00	11:45	Problem solving	5	MVF21,26	Exercises on integer linear optimization theory and algorithms	Exercises in (ii): 14.4, 14.8, 17.9
	Fredag	2015-05-08	10:00	11:45	Lecture	#10	Euler	Multi-objective optimization	(iii): Hand-outs
v 20	Måndag	2015-05-11						<i>Deadline Opposition on Assignment 2</i>	
	Tisdag	2015-05-12	10:00	11:45	Lecture	#11	Euler	Network optimization: Shortest paths, dynamic programming, linear programming formulations of flows	Chapters in (i): 8.1-2, 8.4, (8.5), 18.1-5, (18.6-7), 13.5
	Onsdag	2015-05-13	13:15	15:00	Problem solving	6	MVF21,26	Exercises on network flows	Exercises in (ii): 8.10, 8.12, 8.17a
	Onsdag	2015-05-13	15:15	17:00	Computers booked		F-T4011		
v 21	Tisdag	2015-05-19	10:00	11:45	Lecture	#12	Euler	Linear programming formulations and algorithms for minimum cost network flows	Chapters in (i): 8.6-7
	Onsdag	2015-05-20	13:15	15:00	Computers booked		F-T7203		
	Onsdag	2015-05-20	15:15	17:00	Computers booked		F-T4011		
	Torsdag	2015-05-21	10:00	11:45	Lecture	#13	VK	Overview of non-linear optimization	Chapters in (i): 2.5.1, 9-12
	Fredag	2015-05-22	10:00	11:45	Problem solving	7	MVF21,23	Exercises on non-linear optimization	Exercises in (ii): 9.8, 9.10, 11.4
	Fredag	2015-05-22	23:55					<i>Deadline assignment 3</i>	
v 22	Måndag	2015-05-25	10:00	11:45	Pres		MVL14	Students' presentations of Assignment 3 - preliminary date	
	Tisdag	2015-05-26	10:00	11:45	Pres		MVL14	Students' presentations of Assignment 3 - preliminary date	
	Onsdag	2015-05-27	10:00	11:45	Pres		MVL14	Students' presentations of Assignment 3 - preliminary date	
	Torsdag	2015-05-28	10:00	11:45	Pres		MVL14	Students' presentations of Assignment 3 - preliminary date	