

Week	Lec	Week start	Lectures and Practicals	Activities
1	1	29 th July	Intro	Assignment 0 – Revision questions (not marked)
			<i>Prac1. Matlab intro</i>	
	2		Revision	Solutions handout out for Assignment 0
2	3	5 th August	Linear Programming	
			<i>Project (intro and form groups)</i>	Tutorial 1 – Linear programming basics
	4		Algorithm design in Matlab	Hand in Prac 1, Start A1 – Linear programming basics
3	5	12 th August	The Simplex Algorithm	
			<i>Prac2. Code organisation: modularisation</i>	Start A2 – Program Simplex Phase II
	6		Simplex Phase II	
4	7	19 th August	Simplex Phase I	Hand in A1
			<i>Project (Q&A)</i>	Tutorial 2 – Simplex
	8		Algorithm analysis and Big-O notation	Hand in Prac 2
5	9	26 th August	Duality and Complementary slackness	Hand in A2, Start A3 – Simplex, duality and CSR
			<i>Prac3. bigger problems using data</i>	
	10		Empirical Sensitivity Analysis	
6	11	2 nd Sept	Integer programming , and why it's hard	Hand in A3
			<i>Project (consulting)</i>	Tutorial 3 – Duality and ILPs
	12		Algorithm analysis and complexity	Hand in Prac 3, Start A4 – ILPs
7	13	9 th Sept	Complexity classes (P vs NP)	
			<i>Prac4. Problems to stress Simplex code</i>	
	14		Matlab and AMPL	
8	15	16 th Sept	Heuristics: Greedy	Hand in A4, Start A5 – ILPs and AMPL
			<i>Project (integer programming part)</i>	Tutorial 4 – IPs & complexity
	16		Graph problems and Dijkstra	Hand in Prac 4
BREAK				
9		7 th October	Public holiday on Monday	Hand in A5
			<i>Prac5. AMPL</i>	
	17		Heuristics: GA	
10	18	14 th Oct	Branch and Bound	
			<i>Project (advice on report writing and talk)</i>	Tutorial 5 – Branch and bound
	19		Branch and Bound	Hand in Prac 5, Start A6 – Branch and Bound
11	20	21 st Oct	Linear Programming revisited: primal-dual	
			<i>Prac6. Branch and Bound</i>	
	21		Linear Programming revisited: sensitivity	
12	22	28 th Oct	Linear Programming revisited: interior point	Hand in A6
			<i>Project</i>	Tutorial 6 – Oral presentations
	23		Revision	Hand in Prac 6, Hand in Report