

Detailed Programme: [First Week](#)

Day	Lectures and Activities	Staff
13/July	Sunday : Welcome to participants at the residence	
14/July	Seminar on Heat Integration and Biorefineries	
	15/July	
9:00-10:30	Biomass Transformations; preparations & Thermal drying	Awf Al-Kassir (UEX-SP)
11:00-12:30	Case study: Process integration at biomass plant	Awf Al-Kassir (UEX-SP)
14:00-15:30	Introduction to Optimization The concepts of Linear Programming	Eligius Hendrix (Wur-NL)
16:00-17:30	(mixed) Integer programming applied	Eligius Hendrix (Wur-NL)
	16/July	
9:00-10:30	GAMS language: basics and some features	Henrique Matos (IST/UL-PT)
11:00-12:30	GAMS language : more basics and some more features	Henrique Matos (IST/UL-PT)
14:00-17:30	Visit to FISIFE (Acrylic Fiber Plant at Barreiro)	
	17/July	
9:00-10:30	Sustainability Assessment of Bioenergy brief introduction to LCA- part I	Rocio Diaz-Chavez (IC-UK)

11:00-12:30	Sustainability Assessment of Bioenergy brief introduction to LCA- part II	Rocio Diaz-Chavez (IC-UK)
14:00-15:30	Wider Sustainability assessment: environmental management tools and indicators- part I	Rocio Diaz-Chavez (IC-UK)
16:00-17:30	Wider Sustainability assessment: environmental management tools and indicators- part II	Rocio Diaz-Chavez (IC-UK)
	18/July	
9:00-10:30	Case studies on Biorefineries: Examples from EU Projects	Rocio Diaz-Chavez (IC-UK)
11:00-12:30	Exercise on sustainability assessment and discussion	Rocio Diaz-Chavez (IC-UK)
14:00-15:30	Energy, Environment and Sustainable Development-I	Francisco Moral García (UEX-SP)
16:00-17:30	Energy, Environment and Sustainable Development -II	Francisco Moral García (UEX-SP)
	19/July	
9:00-10:30	Nonlinear Programming applied	Eligius Hendrix (Wur-NL)
11:00-12:30	Global optimization applied GAMS language: some more features	Eligius Hendrix (Wur-NL) Henrique Matos (IST/UL-PT)
14:00-17:30	FREE TIME	
20/july	Sunday : Team Building with a visit to Sintra Village (nearby Lisboa)	

Detail Programme: [Second Week](#)

	21/July	
9:00-10:30	Basic Concepts of Bioenergy and Biorefineries	Sibel Ozdogan (MU-TR)
11:00-12:30	Multi-discipline Approach to Sustainable Bioenergy Systems and Biorefineries	Sibel Ozdogan (MU-TR)
14:00-15:30	Biomass Combustion and Applications	Hayati Olgun, Ege Univ.-TR
16:00-17:30	Biomass Gasification and Applications	Hayati Olgun, Ege Univ.-TR

	22/July	
9:00-10:30	Heat Exchanger Networks models - GAMS session	João Miranda (IPP-PT)
11:00-12:30	Process Control of Biomass Gasification Pilot at IPPortalegre	Sérgio Correia (IPP-PT)
14:00-15:30	Introduction to Process Integration	Henrique Matos (IST/UTL-PT)
16:00-17:30	Tools for Targets using Pinch Analysis	Cristina Fernandes (IST/UTL-PT)
	23/July	
9:00-10:30	Tools for Design using Pinch Analysis	Henrique Matos (IST/UL-PT)
11:00-12:30	Network evolution	Cristina Fernandes (IST/UL-PT)
14:00-15:30	Visit to Portucel (<i>Pulp and Paper</i> plant at Setubal)	
16:00-17:30		
	24/July	
9:00-10:30	Utility Placement	Cristina Fernandes (IST/UTL-PT)
11:00-12:30	Advanced Network Optimization Analysis	Henrique Matos (IST/UTL-PT)
14:00-15:30	Industrial Heat Integration Case Studies	Cristina Fernandes (IST/UTL-PT)
16:00-17:30	Team Project's Development	H.Matos/C.Fernandes
	25/July	
9:00-12:30	Team Project's Development	H.Matos/C.Fernandes
14:00-17:30	Team Project's Presentation	H.Matos/C.Fernandes/J.Miranda
	26/July	
9:00-12:30	Evaluation with all students	H.Matos/J.Miranda/C. Fernandes
13:00	Close of School. Administrative Issues	H.Matos
28/july	Sunday : Departure	