

JSS COURSE: Optimization of Bioenergy Use

Dates: 13.8. – 17.8.2012

7*3 h lectures, which consist of:

1h = state of the art

2h = present subjects of research

3h = future challenges, unresolved problems and needs for further research

13.8.2012 Monday

7:30 – 11:00 and 13:00 – 15:00 Registration to JSS Summer School

12:00 – 14:00 lunch

14.00-14:15 Opening

LECTURER: Ilkka Savolainen (VTT)

14:15-15:00 Topic 1 Future of bioenergy

15:00-16:00 Topic 1 Scenarios

16:00-17:00 Topic 1 Challenges

14.8.2012 Tuesday

LECTURER: Esa Vakkilainen (LUT)

9:00-10:00 Topic 2 Small-scale use of biomass for energy

10:00-11:00 Topic 2 Carbon balances

11:00-12:00 Topic 2

12:00-14:00

LECTURER: Esa Vakkilainen (LUT)

14:00-15:00 Topic 3 Torrefaction & Pellets

15:00-16:00 Topic 3

16:00-17:00 Topic 3

15.8.2012 Wednesday

LECTURER: Franz Winter (TU Wien)

9:00-10:00 Topic 4 Biomass combustion in fluidized beds

10:00-11:00 Topic 4

11:00-12:00 Topic 4

12:00-14:00

LECTURER: Franz Winter (TU Wien)

14:00-15:00 Topic 5 Emissions from thermochemical conversion of biomass

15:00-16:00 Topic 5

16:00-17:00 Topic 5

16.8.2012 Thursday

LECTURER: Jukka Kontinen JY

9:00-10:00 Topic 6 Gasification (CHP, IGCC,...)

10:00-11:00 Topic 6 Gasification-based biorefineries

11:00-12:00 Topic 6

LECTURER: M. Larmi AY

14:00-17:00 Topic 7 Liquid transport fuels based on biomass

14:00-15:00 Topic 7 Larmi: Liquid biofuel properties and availability

15:00-16:00 Topic 7

17.8.2011 Friday

9:30-10:30 Return of the answer papers to lecture questions. Instructions for additional home exercises.

Additional presentations:

10:30-12:00 **Phil Hollins** (Jyväskylä University of Applied Sciences): Biodiesel production from vegetable oils. Includes a practical demonstration.

13:00 – 13:30 **Olli Reinikainen**, Vapo Oy: Finland's peat resources, use of peat and afteruse of cut-away peatlands.

13:30-13:45 Wrap-up and closing