THE DESIGN, DEVELOPMENT AND SCALE-UP OF SAFE CHEMICAL PROCESSES AND OPERATIONS
1-5 June 2018

DAY 1: Monday 1 June 2020
13:00 Introduction (SR)
13:05 The process lifecycle (WW)
13:45 Where hazards arise – a review of reported incidents involving runaway reactions and current legislation (SR)
14:30 Break
15:00 Techniques for safe process design and optimisation (WW)
16:30 Discussion and close of Day 1

Day 2: Tuesday 2 June 2020
13:00 Chemical hazards assessment strategy (SR)
13:30 Fundamental principles of scale-up and reaction runaway (SR)
14:30 Delegates workshop I – calculations on a simple deviation scenario (SR)
15:00 Break
15:15 Identification of highly energetic materials (SR)
15:45 Small scale screening tests for liquids, mixtures and powders (SR)
16:15 Discussion and Close of Day 2

DAY 3: Wednesday 3 June 2020
13:00 Reprise of Day 2
13:10 Reaction characterisation through calorimetry (SR)
13:45 Delegates workshop II – Interpreting laboratory data (SR)
14:45 Break
15:00 Flammability issues associated with chemical manufacture (including a brief discussion of ignition sources including electrostatic hazards and current EU ATEX legislation) (SR/MM)
16:15 Discussion and Close of Day 3

DAY 4: Thursday 4 June 2020
13:00 Reprise of Day 3
13:10 Selection of Safety Measures and Case Study (KM)
14:15 Break
14:30 Emergency relief venting methodology (KM)
15:30 Break
15:45 Emergency relief venting methodology – continued (KM)
17.00 Discussion and Close of Day 4

DAY 5: Friday 5 June 2020
13:00 Emergency relief venting methodology – continued (KM)
14:00 Break
14:15 Relief system case studies (KM)
15:30 Break
15:45 Process control considerations (safety critical systems, Safety Instrumented Systems, ISA S84.01/ IEC 61508/11, equipment reliability and maintenance) (KM)
16:20 Summary and conclusions (KM)
16.30 Discussion and Close of Course
17:00 Finish