

## CH923: Statistics for Data Analysis

### Timetable for 2010-11 Academic Year

#### Tuesday 5<sup>th</sup> October

- 0900 – 1030 Module Introduction – Importance of statistics for life science research (AM)
- 1100 – 1200 Basic notions of probability I (JSF)
- 1200 – 1300 Probability practical I
- 1400 – 1500 Basic notions of probability II (JSF)
- 1500 – 1700 Probability practical II (Spectroscopy lecture for AS-MIT students from 1600)

#### Wednesday 6<sup>th</sup> October

- 0900 – 1030 Summarising data I (AM)
- 1100 – 1230 Summarising data practical I
- 1330 – 1500 Summarising data II (AM)
- 1530 – 1700 Summarising data practical II

#### Monday 11<sup>th</sup> October

- 0900 – 1000 Review of earlier topics (AM/JSF)
- 1000 – 1100 Introduction to statistical computing (AM/JSF)
- 1130 – 1300 Statistical computing practical
- 1330 – 1430 The nature of measurement (AS-MIT) (JSF)
- 1330 – 1430 Sequence comparisons (MOAC/SB/LS) (AM)
- 1500 – 1700 Hypothesis testing I – Philosophy (AM)

#### Tuesday 12<sup>th</sup> October

- 0900 – 1000 Hypothesis testing II – t-test (JSF)
- 1000 – 1100 Hypothesis testing practical I
- 1100 – 1200 Hypothesis testing III – F-test and Chi-square test (JSF)
- 1200 – 1300 Hypothesis testing practical II
- 1400 – 1500 Simple analysis of continuous data I (one-way ANOVA) (AM)
- 1530 – 1700 Simple analyses practical I

#### Monday 18<sup>th</sup> October

- 0900 – 1000 Review of earlier topics (AM/JSF)
- 1000 – 1130 Simple analysis of continuous data II (Blocks / SLR) (AM)
- 1130 – 1300 Simple analyses practical II
- 1330 – 1430 Simple analyses of continuous data III (ANOVA or regression) (AM)
- 1430 – 1530 Simple analyses practical III
- 1600 – 1700 Exam preparation (AM)

**Tuesday 19<sup>th</sup> October**

- 0900 – 1030 Designing experiments (JSF)  
1100 – 1300 Designing experiments practical I  
1400 – 1530 Designing experiments practical II  
1600 – 1700 Sampling and quality control (AS-MIT++) (JSF)

**Wednesday 20<sup>th</sup> October**

- 0900 – 1200 Mid-module examination (computer-based)

**Monday 25<sup>th</sup> October**

- 0900 – 1000 Exam results/feedback and module plans (AM/JSF)  
1000 – 1130 Analysis of designed experiments – ANOVA (JSF)  
1130 – 1300 Analysis of designed experiments practical I  
1400 – 1530 Analysis of designed experiments practical II  
1600 – 1700 More on designing experiments (AS-MIT++) (JSF)  
Review of pre-exam topics (as required) (AM/JSF)

**Tuesday 26<sup>th</sup> October**

- 0900 – 1030 Relationships between variables (AM)  
1100 – 1300 Relationships between variables practical I  
1400 – 1600 Relationships between variables practical II  
1600 – 1700 Statistical approaches for microarrays (MOAC/SB/LS++) (AM)  
Review of pre-exam topics (as required) (JSF/AM)

**Monday 1<sup>st</sup> November**

- 0900 – 1030 Analysis of non-normal data (JSF)  
1100 – 1300 Analysis of non-normal data practical I  
1400 – 1700 Analysis of non-normal data practical II  
Review of pre-exam topics (as required) (AM/JSF)

**Tuesday 2<sup>nd</sup> November**

- 0900 – 1030 Multivariate analysis (AM)  
1100 – 1300 Multivariate analysis practical I  
1400 – 1700 Multivariate analysis practical II  
1500 – 1600 Multivariate calibration and regression (AS-MIT++) (AM)  
Review of pre-exam topics (as required) (JSF/AM)