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<th>Date</th>
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<td>09.15 – 09.30</td>
<td>Registration</td>
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| Day 1    | 09.30 – 09.45 | Lecture: Introduction to the course and Birmingham Metabolomics Training Centre  
**Dr Cate Winder** |
|          | 09.45 – 10.30 | Lecture: Introduction to metabolomics  
**Professor Warwick Dunn** |
|          | 10.30 – 11.15 | Lecture: Experimental design with case studies  
**Professor Warwick Dunn** |
|          | 11.15 – 11.30 | Break                                                                   |
|          | 11.30 – 12.15 | Lecture: Analytical strategies applied in metabolomics to analyse complex biological samples  
**Professor Warwick Dunn** |
|          | 12.15 – 13.00 | Lunch                                                                   |
|          | 13.00 – 13.45 | Lecture: Sample preparation strategies in microbial metabolomics  
**Dr Cate Winder** |
|          | 13.45 – 15:15 | **Group 1:** Lab session: Sample preparation strategies (quenching)  
**Dr Andrew Southam**  
**Group 2:** Lab session: UHPLC-MS set-up and familiarization  
**Dr Cate Winder** |
|          | 15.15 – 15.30 | Break                                                                   |
|          | 15.30 – 17.00 | **Group 1:** Lab session: UHPLC-MS set-up and familiarization  
**Dr Cate Winder**  
**Group 2:** Lab session: Sample preparation strategies (quenching)  
**Dr Andrew Southam** |
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| 09.15 – 10.45 | Sample preparation strategies (extractions)  
Dr Andrew Southam  | UHPLC-MS data acquisition  
Dr Cate Winder |
| 10.45 – 11.00 | Break               |                      |
| 11.00 – 12.30 | Lab session: UHPLC-MS data acquisition  
Dr Cate Winder  | Sample preparation strategies (extractions)  
Dr Andrew Southam  |
| 12.30 – 13.15 | Lunch               |                      |
| 13.15 – 14.15 | Data review and MS/MS data acquisition  
Dr Cate Winder  |                      |
| 14.15 – 14.45 | Workshop: Experimental design  
Dr Cate Winder  |                      |
| 14.45 – 15.00 | Break               |                      |
| 15.15 – 17.30 | Computer workshop: Data processing and assessing data quality  
Dr Andris Jankevics  |                      |

**Day 3**

| Time       | Lecture | Computer workshop: Data analysis with example data using MetaboAnalyst  
Dr Gavin Lloyd  |
|------------|---------|-------------------------------------------------|
| 09.15 – 10.15 | Introduction to data analysis  
Dr Gavin Lloyd  |                      |
| 10.15 – 12.15 | Data analysis with example data using MetaboAnalyst  
Dr Gavin Lloyd  |                      |
| 12.15 – 12.45 | Lunch   |                      |
| 12.45 – 13.30 | Introduction to metabolite annotation and identification  
Professor Warwick Dunn  |                      |
| 13.30 – 14.45 | Metabolite Identification pipeline  
Professor Warwick Dunn  |                      |
| 14.45 – 15.45 | Q&A : Tips and tricks from the experts and question session  
Professor Warwick Dunn, Dr Cate Winder  |                      |
| 15.45 – 16.00 | Feedback session  
Mr David Epps  |                      |