

**IBT\_2018 course schedule\***

\*subject to slight changes. Up-to-date due dates reflected in Vula

|  |  |  |
| --- | --- | --- |
| Date | Topic | Trainer |
| **Welcome to the course!** | | |
| Tuesday,  **11 September** | Introductory session 1  - welcome to the course! | Verena Ras,  *University of Cape Town* |
| Thursday, | Introductory session 2 | Pedro L. Fernandes |
| **13 September** | - what is bioinformatics and why is it important? | *Instituto Gulbenkian de Ciência, Oeiras, Portugal* and |
|  |  | David P. Judge |
|  |  | *Freelance independent* |
|  |  | *Bioinformatics instructor* |
| **Module 1: Introduction to databases and resources** | | |
| Tuesday, | Session 1: Biological databases and resources | Shaun Aron |
| **18 September** | (NCBI, EBI) | *University of Witwaterstrand, South* |
|  |  | *Africa* |
| Thursday,  **20 September** | Session 2: Advanced literature searching – PubMed | Shaun Aron |
| Tuesday,  **25 September** | Session 3: DNA analysis – e.g. sequence features, start site, restriction sites etc | Shaun Aron |
| Thursday,  **27 September** | Session 4: Protein function classification | Shaun Aron |
|  | **Dates for Module 1 Assessment** |  |
| \*Monday,  **24 September** | Assessment available for the ‘introduction to databases and resources’ module via Vula ‘Assessments’ tab | individual |
| \*Monday,  **1 October** | **FINAL hand-in date** for ‘introduction to databases and resources’ assessment | individual |
| **Module 2: Linux** | | |
| Tuesday,  **2 October** | Session 1: Introduction to Linux and UNIX and the command line | Amel Ghouila  *Institute Pasteur de Tunis, South Africa* |
| Thursday,  **4 October** | Session 2: Manipulating files. Useful commands and tips | Amel Ghouila |
| Tuesday,  **9 October** | Session 3: Permissions, groups and process control | Amel Ghouila |

|  |  |  |  |
| --- | --- | --- | --- |
| Thursday,  **11 October** | Session 4: Consolidation session – applications of Linux | Amel Ghouila | |
|  | **Dates for Module 2 Assessment** |  | |
| \*Monday,  **15 October** | Assessment available for the ‘Linux’ module via Vula ‘Assessments’ tab | individual | |
| \*Monday,  **22 October** | **FINAL hand-in date** for ‘Linux’ assessment | individual | |
| **Module 3: Sequence alignment theory and application** | | | |
| Tuesday,  **16 October** | Session 1: Introduction to searching and sequence alignment | | Jonathan Kayondo,  *Uganda Virus Research Institute, Uganda* |
| Thursday,  **18 October** | Session 2: Pairwise sequence alignment | | Jonathan Kayondo |
| Tuesday,  **23 October** | Session 3: BLAST algorithm | | Sonal Henson,  *International Centre of Insect Physiology and Ecology, Kenya* |
| 25 October | NO SESSION | |  |
|  | **Dates for Module 3 Assessment** | |  |
| \*Friday,  **26 October** | Assessment available for the ‘sequence alignment theory and application’ module via Vula ‘Assessments’ tab | | individual |
| \*Friday,  **02 November** | **FINAL hand-in date** for ‘sequence alignment theory and application’ assessment | | individual |
| **Module 4: Multiple sequence alignment** | | | |
| Tuesday,  **30 October** | Session 1: Applications of multiple sequence alignment | | Ahmed Mansour Alzohairy  *Zagazig University, Egypt* |
| Thursday,  **02 November** | Session 2: Choosing the right sequences and the right software | | Ahmed Mansour Alzohairy |
|  | **Dates for Module 4 Assessment** | |  |
| \*Monday,  **5 November** | Assessment available for the ‘multiple sequence alignment’ module via Vula ‘Assessments’ tab | | individual |
| \*Monday,  **12 November** | **FINAL hand-in date** for ‘multiple sequence alignment’ assessment | | individual |
| **Module 5: Genomics** | | | |
| Tuesday,  **6 November** | Session 1: Genome sequences – sequencing technology and NGS overview | | Fatma Guerfali  *Institute Pasteur de Tunis, Tunisia* |
| Thursday,  **8 November** | Session 2: Genome annotation including genome browsers (feature finding etc)\* | | Emily Perry  *European Bioinformatics Institute (EMBL-EBI)* |
| Tuesday,  **13 November** | Session 3: Comparative genomics | | Fatma Guerfali |

|  |  |  |  |
| --- | --- | --- | --- |
| Thursday,  **15 November** | Session 4: Human variation\* | | Emily Perry |
| Tuesday,  **20 November** | Session 5: Consolidation session | | Fatma Guerfali |
| **22 November** | NO SESSION | |  |
|  | **Due date for Module 5 Assessment** | |  |
| \*Friday,  **23 November** | Assessment available for the ‘genomics’ module via Vula ‘Assessment’ tab | | individual |
| \*Friday,  **30 November** | **FINAL hand-in date** for ‘genomics’ assessment | | individual |
| **Module 6: Molecular evolution and phylogenetics** | | | |
| Tuesday,  **27 November** | Session 1: Mechanisms of molecular evolution and speciation | Jean-Baka  *University of the Western*  *Cape, South Africa* | |
| Thursday,  **29 November** | Session 2: Building phylogenies from biological data nowaday | Jean-Baka | |
| Tuesday,  **4 December** | Session 3: Complexity of the space of phylogenetic models | Jean-Baka | |
| Thursday,  **6 December** | Session 4: Tree building with maximum likelihood approaches | Jean-Baka | |
|  | **Due date for Module 6 Assessment** |  | |
| \*Friday,  **07 December** | Assessment available for the ‘molecular evolution and phylogenetics’ module via Vula ‘Assessments’ tab | individual | |
| \*Wednesday,  **12 December** | **FINAL hand-in date** for ‘molecular evolution and phylogenetics’ assessment | individual | |
| **Final session** | | | |
| Tuesday,  **11 December** | Consolidation | TBC | |
| Friday,  **14 December** | **Course ends** |  | |