| Topic  | References                          | Timeline               |
|--|-------------------------------------|------------------------|
| Basic concepts   |                                     | 1 weeks                |
| Topic 1 What is Machine learning                         | HOML Ch. 1 / ISL Ch. 2              | Mon, Oct 23            |
| Topic 2 – A Machine Learning Project                     | HOML Ch. 2 / ISL Ch. 2              | Mon, Oct 23            |
| Topic 3 – Resampling methods and Fine-tuning             | ISL Ch. 3 / HOML Ch. 2 / IMLP Ch. 5 | Tue, Oct 24            |
| Supervised learning                                      |                                     |                        |
| Topic 4 – Classification                                 | HOML Ch. 3 / ISL Ch. 4              | Mon - Tue, Oct 30 - 31 |
| SPECIAL TALK (not really part of the course)             |                                     | Thu, Nov 2             |
| HW#1 Lab session   |                                     | Mon, Nov 6             |
| Topic 5 – Tree-based Methods                             | HOML Ch. 1 & ISL Ch. 2              | Tue - Wed, Nov 7-8     |
| HW#2 Lab session   |                                     | Mon, Nov 13            |
| Topic 6 – Neural Networks                                | HOML Ch. 1 & ISL Ch. 2              | Tue - Wed, Nov 14-15   |
| Unsupervised Learning                                    |                                     |                        |
| Topic 7 – Dimensionality Reduction                       | HOML Ch. 1 & ISL Ch. 2              | Mon-Tue, 20-21         |
| Topic 8 – Clustering                                     | HOML Ch. 1 & ISL Ch. 2              | Wed - Mon, Nov 22 - 27 |
| HW#3 Lab session   |                                     | Tue, Nov 28            |
| Advanced topics  |                                     | 1 day                  |
| Deep Computer Vision Using Convolutional Neural Networks | TBC                                 | Wed, Nov 29            |
| Natural Language Processing                              | ТВС                                 | Mon, Dec 4             |