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| **DS&AI course building blocks** | ARTIFICIAL INTELLIGENCE (3 credits, core) | |
| **Section 1** | **Introduction to AI** | |
| Lesson 1 | What is (artificial) intelligence | Video, slides, discussion forum |
| Lesson 2 | History of artificial intelligence | Slides, reading material |
| **Section 2** | **Intelligent agents** | |
| Lessons 3 + 4 | Intelligent agents | Slides |
| **Section 3** | **Planning and decision** | |
| Lessons 5 + 6 | Decision making | Slides, reading material, programming assignment for lab session |
| Lesson 7 | Heuristic Algorithms |  |
| **Section 4** | **Planning and decision** | |
| Lesson 8 | Propositional logic | Slides |
| Lesson 9 | Predicate logic | Slides |
| Lesson 10 | Logical agents | Slides |
| Lessons 11+12 | Prolog | Slides, reading material, programming assignment for lab session |
| **Section 5** | **Planning under uncertainity** | |
| Lessons 13+14 | Bayesian networks | Slides, reading material, programming assignment for lab session |
| Lessons 15+16 | (Partially observable) Markov decision networks | Slides |
| **Section 6** | **Temporal planning** | |
| Lessons 17+18 | Temporal reasoning | Slides, reading material, programming assignment for lab session |
| Lessons 19+20 | Scheduling | Slides |

Total 25 hours lab sessions and 20 hours lessons