# Syllabus for Quiz 2 (to be held on Nov 5)

**Sources**

- Russell & Norvig's textbook (AIMA)
- Slides available in the AIMA book website
- Slides posted via Google classroom

**Syllabus**

| Ch. | Subject | Topics/Skills required |
|---|---|---|
| 13 | Quantifying Uncertainty | • Understanding basic notions of probability, conditional probability, independence, full joint distribution, Bayes' rule |
| 14 | Probabilistic Reasoning | • Understanding conditional independence<br>• Understanding the basic principle of Bayesian Networks<br>• Ability to make inference given the topology and conditional probability tables of a given Bayesian network |
| 15 | Temporal Reasoning | • Understanding the basic principles of a Markov process<br>• Ability to perform basic calculations given the transition table of a Markov process<br>• Understanding the basic principles of a Hidden Markov Model (HMM)<br>• Ability to make inference given the transition and emission probabilities of a Hidden Markov Model |
| 16, 17 | Decision Making | • Understanding basic notions of Utility, Lottery, Maximum Expected Utility and rational decision-making<br>• Understanding the basic principle of a Markov Decision Process (MDP) |