COSC 6368 (Fall 2016)

Review List Final Exam on December 8, 2p

The final exam is scheduled for Thursday, December 8, **2p** in our classroom. The exam will take 115 minutes and is open-books and notes and you can bring your favorite bird, but friends and other human beings are not permitted and, more importantly the use of computers is not permitted!

Relevant Slide Sets, pasted from the COSC 6368 Website, that are relevant for the midterm exam:

2016 Teaching Material Evolutionary Computing (**EC**): EC1: [Introduction to Evolutionary Computing](http://www2.cs.uh.edu/~ceick/ai/EC1.pptx) and EC2:[Example: Using EC to Solve Travelling Salesman Problems](http://www2.cs.uh.edu/~ceick/ai/EC2.pptx).

2016 AI Planning Slides: PL1: Sketch How a STRIPS-like Planning System Solves a Block's World Problem (was done on the white board in the lecture on Tu., Oct. 6 ([Sheet1](http://www2.cs.uh.edu/~ceick/ai/WBP1.pdf), [Sheet2](http://www2.cs.uh.edu/~ceick/ai/WBP2.pdf))), [PL2](http://www2.cs.uh.edu/~ceick/ai/PL2.pptx) (Blythe, Ambile, Gil (USC): *Introduction to Planning* slides, covered in the lecture), [PL3](http://www2.cs.uh.edu/~ceick/ai/ECAI14Rintanen.pdf) (Jussi Rintanen's ECAI 2014 Planning Tutorial; we will discuss slides 1-7, 10-14, 31, 51-52)

2016 Machine Learning Transparencies:

[Quick Introduction to Machine Learning](http://www2.cs.uh.edu/~ceick/ai/6368-ML-Intro.pptx).

Reinforcement Learning: [RL1](http://www2.cs.uh.edu/~ceick/ai/RL1.pptx) (Introduction to Reinforcment Learning), [RL2](http://www2.cs.uh.edu/~ceick/ai/RL-Robot-Soccer.pdf) (Using Reinforcement Learning for Robot Soccer), [RL3](http://www2.cs.uh.edu/~ceick/ai/kaelbling-rl.pdf) (Kaelbling's RL Survey Article: read sections 1, 2, 3, 4.1, 4.2, 8.1 and 9 discussed in the lecture)

Decision Trees: [DT1](http://www2.cs.uh.edu/~ceick/ai/Eick_DT.pptx) (Dr. Eick's Introduction to Decision Trees, [DT2](http://www2.cs.uh.edu/~ceick/ai/russel18.pdf) (Russel Decision Tree Slides; only the first 6 transparencies will be used)

Neural Networks: [NN1](http://www2.cs.uh.edu/~ceick/ai/russel20.pdf) (Russel's Introduction to Neural Networks), [NN2](http://www2.cs.uh.edu/~ceick/ai/nn.ppt) (Dr. Eick's additional NN slides),

2016 Decision Making and Reasoning in Uncertain Environment Transparencies

[Review Probability Theory](http://www2.cs.uh.edu/~ceick/ai/Probability-Review.pptx)

[Dr. Eick's Transparencies on "Naive Bayesian Classifiers"](http://www2.cs.uh.edu/~ceick/bayes.ps) (only transparencies 1 & 13 will be used in the lectures)

Russel's [Introduction to Belief Networks](http://www2.cs.uh.edu/~ceick/ai/chapter14a.pdf) (transparencies 1-6, 8-9 and 29 will be covered in class)

Dr. Eick's [Computations in and with Belief Networks](http://www2.cs.uh.edu/~ceick/ai/Bbn.pptx) (to be covered in the lecture) Transparencies

**Tentative Weights of the main topics in the midterm exam**: Specify a state space (0-10%), Evolutionary Computing (10-15%), Planning (5-15%), Machine Learning (40-45%), Decision Making and Reasoning in Uncertain Environment (25-35%),

Relevant material from the Russel textbook (Third Addition):

Chapter 10: pages 366-372

Chapter 11: pages 480-499 (only if you are very weak in Probability Theory; the exam will not ask any specific questions about things that are discussed in the book but not in the transparencies)

Chapter 14: 510-517

Chapter 17: 645-656

Chapter 18: 693-710, 727-737

Chapter 21: 830-845, 853

Material that was discussed in class that is relevant for the midterm exam (but not necessarily is discussed in the textbook):

**Eiben-Smith Article**: the whole article is relevant except section 2.4.1 and section 2.6

**Kaelbling's RL Survey Article:** sections 1, 2, 3, 4.1, 4.2, 8.1 and 9 are relevant