

COSC 4368 (Spring 2019)  
Review List Final Exam on Monday, May 6, 2-4p

The Midterm2 is scheduled for May 6 at **2p** in our classroom. The exam will take about 120 minutes and is open-books and notes but **the use of computers is not permitted!**

The final exam will be different from MT1&2 in that it contains several "writing tasks": e.g. interpreting/commenting on a development in AI, discussing potential application(s) of an AI technology, and making proposals on how to deal with ethical problems of AI. Relevant slide shows, pasted from the COSC 4368 Website which are relevant for the midterm exam include:

2019 Introduction to AI and Course Information COSC 4368 (the final exam might ask a question/ask to comment on: AI politics or definitions of AI but not both)

2019 Machine Learning Transparencies:

- [Introduction to Supervised Learning](#) (also called "Learning from Examples")
- Neural Networks: [NN1](#) (3blue1brown: *What is a Neural Network?* (will show the first 12:30 of this video)), [NN2](#) (Dr. Eick's NN slides), [NN3](#) (Russel's Introduction to Neural Networks, not covered in the lecture, but you might take a look at it).
- [Support Vector Machines](#)
- [A Short Introduction to Deep Learning](#) (by Fabio Gonzalez, National University of Colombia)

2019 Logical Reasoning Transparencies:

- [Russel Introduction to First Order Predicate Logic \(FOPL\) Transparencies](#) (will cover slides 1-11, 13-23 and 32)
- Dr. Eick's [Introduction to Resolution](#) and [Simple examples of resolution proofs](#) (Ascii; helpful for the ProblemSet3 Logical Reasoning Tasks!).
- Dr. Eick's additional [Transparencies Predicate Logic and Resolution](#)(transparencies 1, 2 and 4 will be covered in 2019!).

2019 Decision Making and Reasoning in Uncertain Environment Transparencies

- [Review Probability Theory](#)
- [Dr. Eick's Transparencies on "Naive Bayesian Classifiers"](#) (only transparencies 1 & 13 will be used in the lectures)
- Russel's [Introduction to Belief Networks](#) (transparencies 1-6, 8-9 and 29 will be covered in class)
- Dr. Eick's [Computations in and with Belief Networks](#) (to be covered in the lecture)  
Transparencies

2019 Ethical and Societal Aspects of AI

- [Ethics for AI](#) (short video, motivating the need for ethics for AI and what problems it needs to address)
- [AI FOR GOOD - Ethics in AI](#) (a video discussing how to incorporate ethics into AI systems)
- [Top 9 Ethical Issues in AI](#)

2019 [Multi-Agent Systems Video](#) (4:00-19:00; there will be a short problem/question about MAS in the final exam)

Relevant material from the Russel textbook (Third Edition):

Chapter 8 285-300 Chapter 9: 322-328 Chapter 13: 480-486(top) 495-499 (Section 13.5) Chapter 14: 510-515 Chapter 18 695-697 727-737 744-748 Chapter 26: 1034-1040.