KMM Ontologies Recommended Reading

Lecture 1 Introduction
*"What are ontologies and why do we need them?
B. Chandrasekaran, J. R. Josephson and V. R. Benjamins
IEEE Intelligent Systems, Jan/Feb 1999, 14(1), pp. 20-26.
http://www.cse.ohio-state.edu/~chandra/What-are-ontologies-and-why-we-need-them.pdf

Lecture 2 Methodology
* Gomez-Perez, A., Fernandez-Lopez, M., and
Corcho, O. Ontological Engineering. Springer 2004, pp.125-142

These papers also show Methontology being applied:
Corcho, O. Gomez-Peres, A. and Pazos Sierra, A. Building a chemical ontology. IEEE Intelligent Systems Jan/Feb 1999
http://ieeexplore.ieee.org/xpl/abs_free.jsp?arNumber=747904

Corcho, O., Fernandez-Lopez, M., Gomez-Perez, A. and Lopez-Cima, A.Building legal ontologies.
http://users.isoco.net/~ocorcho/documents/LawSemWeb2004_CorchoEtAl.pdf

* N. Noy and D McGuinness Ontology Development 101: A Guide to Creating Your First Ontology SMI Report Number: SMI-2001-0880
http://protege.stanford.edu/publications/ontology_development/ontology101.pdf

Lectures 3 and 4 Description Logic
No recommended reading beyond the handouts, lecture notes and tutorials, however, these may be useful:

Horrocks, Ian. Optimising tableaux decision procedures for Description Logics (1997)
Chapters 1-3 are most relevant, read selectively.
http://www.cs.man.ac.uk/~horrocks/Publications/download/1997/UMCS-97-2-1.ps.gz

General introductions to DL can be found here - DL in one paragraph:
http://en.wikipedia.org/wiki/Description_logic

Baader, F., Calvanese, D., McGuiness, D., Nardi, D., and Patel-Schneider, P. Description Logic Handbook (Chapter 2)
http://www.inf.unibz.it/~franconi/dl/course/dlhb/dlhb-02.pdf

OWL:
Ian Horrocks, Peter F. Patel-Schneider, and Frank van Harmelen. From SHIQ and RDF to OWL: The making of a web ontology language. J. of Web Semantics, 1(1):7-26, 2003.
http://www.cs.man.ac.uk/~horrocks/Publications/download/2003/HoPH03a.pdf

W3C pages:
http://www.w3.org/2004/OWL/

Lectures 5 and 6 Examples

Read up on at least one of the following ontologies (recommended). This is also required in order to answer question 2 in the assessed exercise. The UMLS may also be selected, although strictly speaking it is not developed as an ontology.

A. Gene Ontology http://www.geneontology.org/
Nature Genetics (2000) 25 :25-29.
http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=10802651&dopt=Abstract
Genome Research (2001) 11:1425-1433.
http://www.genome.org/cgi/content/full/11/8/1425

B. Foundational Model of Anatomy http://www.digitalanatomist.com/
a list of papers can be found here:
http://sigpubs.biostr.washington.edu/view/projects/Foundational_Model_of_Anatomy.html
Noy, N. F. and Musen, M. A. and Mejino, J. L. V. and Rosse, C. (2004) Pushing the Envelope: Challenges in a Frame-Based Representation of Human Anatomy.
Mejino, J. L. V. and Rosse, C. (2004) Symbolic modeling of structural relationships in the Foundational Model of Anatomy.
The definitions are here:
http://sig.biostr.washington.edu/research/ai/definitions.html

C. Enterprise Ontology http://www.aiai.ed.ac.uk/project/enterprise/
Mike Uschold, Martin King, Stuart Moralee and Yannis Zorgios (1998) The Enterprise Ontology The Knowledge Engineering Review , Vol. 13, Special Issue on Putting Ontologies to Use (eds. Mike Uschold and Austin Tate).
http://www.aiai.ed.ac.uk/project/pub/documents/1998/98-ker-ent-ontology.ps

D. Cyc Ontology http://www.cyc.com/
Guha, R. V. and D. B. Lenat. "Cyc: A Midterm Report." AI Magazine (Fall 1990).
http://www.cyc.com/doc/articles/midterm_report_1990.pdf
A list of more recent papers can be found here: http://www.cyc.com/cyc/technology/pubs
Reed, Stephen and D. Lenat. Mapping Ontologies into Cyc. In AAAI 2002 Conference Workshop on Ontologies For The Semantic Web, Edmonton, Canada, July 2002.
Panton, Kathy, P. Miraglia, N. Salay, et al. Knowledge Formation and Dialogue Using the KRAKEN Toolset. In Eighteenth National Conference on Artificial Intelligence, Edmonton, Canada, 2002.

Cyc vocabulary:
http://www.cyc.com/cycdoc/vocab/vocab-toc.html

Lecture 7

Morton E. Winston, Roger Chaffin and Douglas Herrmann A taxonomy of part-whole relations.
Cognitive Science Volume 11, Issue 4 , October-December 1987, Pages 417-444
http://www.sciencedirect.com/

Achille C. Varzi Parts, wholes, and part-whole relations: The prospects of mereotopology.
Data & Knowledge Engineering, Volume 20, Issue 3, November 1996, Pages 259-286
(no need to read the entire article, the first few pages are sufficient)

http://www.sciencedirect.com/

Lecture 8

Thomas R. Gruber Toward Principles for the Design of Ontologies Used for Knowledge Sharing.
http://citeseer.ist.psu.edu/gruber93toward.html

Adil Hameed, Derek Sleeman and Alun Preece Detecting mismatches among experts' ontologies acquired through knowledge elicitation. Knowledge-Based Systems, Volume 15, Issues 5-6, July 2002, Pages 265-273
http://www.sciencedirect.com/

Lecture 9

Aldo Gangemi, Nicola Guarino, Claudio Masolo, Alessandro Oltramari,
Luc Schneider Sweetening Ontologies with DOLCE. Proc. EKAW 2002 :166 - 181
http://www.loa-cnr.it/Papers/DOLCE-EKAW.pdf

Nicola Guarino and Christopher A. Welty An Overview of OntoClean. In Steffen Staab and Rudi Studer, eds., The Handbook on Ontologies. :151-172.
http://www.loa-cnr.it/Papers/GuarinoWeltyOntoCleanv3.pdf