

## Philosophy 511 – Modal Logic – Spring 2008

Tuesdays and Thursdays 9:30-10:45am in W-23 Machmer.

I am ... Professor Kevin C. Klement (Please call me “Kevin”)  
My office is ... 353 Bartlett Hall  
My office hours are ... Tues. 11:00am-12:00pm, Thurs. 12:00-1:00pm and by appointment  
My phone numbers are ... office: (413) 545-5784 home: (413) 665-9559  
My e-mail address is ... klement@philos.umass.edu  
Our course webpage is ... <http://courses.umass.edu/phil511/>

**Course description:** Consideration of various systems for treating the logic of necessity and possibility, including both deductive systems and elementary formal semantics for languages with modal operators. Possible secondary treatment of related issues in logic, such as tense logic, deontic logic, propositional attitudes and intensional logic generally.

**Prerequisite:** Phil 310 (Intermediate Logic) or equivalent, or consent of instructor.

**Required texts:** James W. Garson, *Modal Logic for Philosophers*. (Cambridge University Press, 2006. ISBN: 0521682290). It is available at Amherst Books on Main St. in downtown Amherst.

We will also be making extensive use of in-class handouts, which will also be made available for download on our course webpage.

**Requirements and Grading:** Your course grade is determined by the following requirements:

Homework packet 1:	10%
Homework packet 2:	10%
Homework packet 3:	10%
Homework packet 4:	10%
Take-home midterm:	25%
Take-home final:	25%
<u>Attendance/Participation:</u>	<u>10%</u>
Total	100%

**Homework:** Homework will be assigned almost every class period. You are expected to *attempt* to complete each assignment by the next class period, though if you get stuck, you may ask for help during the next class. On February 28<sup>th</sup>, March 25<sup>th</sup>, April 22<sup>nd</sup> and May 22<sup>nd</sup>, I will collect all the homework assigned that has not yet been collected, and assign a grade to the packet as a whole. In general, your grade on your homework will be determined as much by depth of engagement, diligence and comprehensiveness as by getting the correct answer.

**Exams:** The midterm and final exam in this course will take the form of take-home exams covering the material discussed in class prior to the exam. Typically, the exams will contain a number of questions, some asking for a proof, derivation or solution to a logical problem, and possibly an essay question or two. Typically, you will be given some choice regarding which questions to answer. You will have a week (and hopefully more) to complete the exam.

**Policies:** Homework and exams may be handwritten. You may collaborate with your peers on *homework* assignments provided you do not *copy from them*. However, you may *not* collaborate with your peers on *exams*.

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### Course Schedule (Tentative – Likely to Change!)

January 29 <sup>th</sup> :	Course Introduction
January 31 <sup>st</sup> – February 14 <sup>th</sup> :	Deductive systems for Propositional Modal Logic (K, T, B, S4, S5) <i>Chapters 1-2 of Garson's Book</i>
February 19 <sup>th</sup> (Tuesday): February 21 <sup>st</sup> :	No class. (University follows Monday class schedule.) A quick look at Deontic, Temporal and other Logics <i>Sections 2.3-2.9 in Garson's Book</i>
<b>February 28<sup>th</sup> (Thursday):</b>	<b>Homework Packet 1 Due (covering the above)</b>
February 26 <sup>th</sup> – March 6 <sup>th</sup> :	Semantics for Propositional Modal Logic; Semantic Trees <i>Chapters 3-7 of Garson's Book</i>
March 11 <sup>th</sup> – 13 <sup>th</sup> :	Metatheory for Propositional Modal Logic (Soundness and Completeness) <i>Chapter 8 of Garson's Book</i>
March 17 <sup>th</sup> – 21 <sup>st</sup> :	Spring Break. No Class.
<b>March 25<sup>th</sup> (Tuesday):</b>	<b>Homework Packet 2 Due (covering the above)</b>
<b>April 3<sup>rd</sup> (Thursday):</b>	<b>Take-Home Midterm Due</b>
March 25 <sup>th</sup> – April 10 <sup>th</sup> :	Quantified Modal Logic Identity, Existence, Domain Variance, Rigidity, etc. <i>Chapter 12 of Garson's Book</i>
<b>April 22<sup>nd</sup> (Tuesday):</b>	<b>Homework Packet 3 Due (covering the above)</b>
April 15 <sup>th</sup> – April 29 <sup>th</sup> :	Semantics for quantified modal logic; Semantic trees <i>Chapters 13-14 of Garson's Book</i>
May 1 <sup>st</sup> – May 6 <sup>th</sup> :	Metatheory for Quantified Modal Logic <i>Chapters 15-16 of Garson's Book</i>
May 8 <sup>th</sup> – May 13 <sup>th</sup> :	Descriptions and Scope Distinctions <i>Chapters 18-19 of Garson's Book</i>
<b>May 22<sup>nd</sup> (Thursday/End of Finals):</b>	<b>Homework Packet 4 Due / Final Exam Due</b>

A more detailed course schedule, listing exact readings and a list of homework assignments, will be maintained on our course webpage (<http://courses.umass.edu/phil511/>).