

**COURSE INFORMATION**

Fall 2009: Symbolic Logic  
 PHIL 012: 001 [MWF 10.10–11a.m.]: [203 Willard]  
 PHIL 012: 002: WEB

**CONTACT INFORMATION**

David Agler (dwa132@psu.edu)  
 Office hours: By appointment (see email)  
 Office Location: 228 Sparks

**Texts**

Packet	<i>Phil 012 Course Packet</i> (Available in the Bookstore)
Bergmann, et alia	<i>The Logic Book</i> . Boston: McGraw Hill. 5 <sup>th</sup> ed. ISBN: 9780073535630
Roberts, Don D.	<i>The Existential Graphs of Charles S. Peirce</i> . 1973. Mouton: The Hague. [Recommended, not Required]

**Reading List**

<b>Reading List</b>		
24 Aug	<b>Sentential Logic</b>	Syllabus. Basic Concepts in Logic. Read Bergmann, pp.1–27; Packet, pp.1–7
26		Basic Concepts in Logic. Read Bergmann, pp.1–27; Packet, pp.8–12
28		Sentential Logic: Symbolization and Syntax. Read Bergmann, pp.28–74; Packet, pp. 13–17
31 Sep		Semantics, Tables, and Properties: Read Bergmann, pp.75–114; Packet, pp.18–26
2		Semantics, Tables, and Properties: Read Bergmann, pp.75–114; Packet, pp.27–29; Online HW: Due at noon
4	<b>Test #1</b>	<b>Translation, Semantics, and Tables [Logic Notebook #1 Due]</b>
7		No Class — Labor Day
9		Truth-Trees: Read Bergmann, pp.115–153
11		Truth-Trees: Read Bergmann, pp.115–153
14		Truth-Trees: Read Bergmann, pp.115–153
16		Proofs/Derivations: Read Bergmann, pp.160–228; Packet, pp.30–34
18		Proofs/Derivations: Read Bergmann, pp.160–228; Packet, pp.35–38
21		Proofs/Derivations: Read Bergmann, pp.160–228; Packet, pp.39–47
23		Proofs/Derivations: Read Bergmann, pp.160–228; Packet, pp.48–50
25		<b>No Class — Study Day [Do Sample Test #1, then Check your Answers]</b>
28		Proofs/Derivations: Read Bergmann, pp.160–228
30		Proofs/Derivations: Read Bergmann, pp.160–228
2 Oct		Proofs/Derivations: Read Bergmann, pp.160–228
5	<b>Test #2</b>	<b>Trees and Proofs [Logic Notebook #2 Due]</b> <i>Note of Warning: This is the most difficult test in the course.</i>
7	<b>Predicate Logic</b>	Symbolization and Syntax. Read Bergmann, pp.276–359; Packet, pp.69–71
9		Symbolization and Syntax. Read Bergmann, pp.276–359; Packet, pp.72–74
12		Truth-Functional Expansions. Read Bergmann, pp.409–423; Packet, pp.72–74
14		Truth-Functional Expansions. Read Bergmann, pp.409–423; Packet, pp.72–74
16		Truth-Trees. Read Bergmann, pp.458–531
19		Truth-Trees. Read Bergmann, pp.458–531
21		Truth-Trees. Read Bergmann, pp.458–531
23		Truth-Trees. Read Bergmann, pp.458–531
26		Proofs/Derivations: Read Bergmann, pp.532–607
28		Proofs/Derivations: Read Bergmann, pp.532–607
30		Proofs/Derivations: Read Bergmann, pp.532–607
4		Proofs/Derivations: Read Bergmann, pp.532–607
6		Proofs/Derivations: Read Bergmann, pp.532–607
9	<b>Test #3</b>	<b>Translation, Syntax and Expansions [Logic Notebook #3 Due]</b>
11	<b>Existential Graphs</b>	Read Roberts, pp.31–40; Packet, pp.78–82
13		Read Roberts, pp.31–40; Packet, pp.78–82
16		Read Roberts, pp.40–46; Packet, pp.83–93
18		Read Roberts, pp.40–46; Packet, pp.83–93

20		Read Roberts, pp.40–46; Packet, pp.83–93
23		<b>No Classes</b>
25		<b>No Classes</b>
27		<b>No Classes</b>
30		Read Roberts, pp.47–55; See handouts
2 Dec		Read Roberts, pp.47–55; See handouts
4		Read Roberts, pp.47–55; See handouts
7		Read Roberts, pp.47–55; See handouts
9		Read Roberts, pp.47–55; See handouts
11		Study Day
	<b>Test #4</b>	<b>TBA 14–18 December [Logic Notebook #4 Due]</b>

### I. Course Description

Symbolic logic is an introductory, three-credit-hour, course taught frequently in undergraduate philosophy programs. The course teaches (1) translating English propositions and arguments into a variety of different formal representations, e.g. first-order propositional, first-order predicate, existential graphs, modal logic, etc., (2) syntactic proof-procedures for logically valid arguments, (3) pseudo-mechanical tests for formal properties of propositions and arguments, e.g. validity, consistency, equivalence, invalidity, etc.

### II. Grade Evaluation, Scale, Breakdown

- 72% Four Tests (18% each)
- 20% Four Examinations of Logic Notebook (5% each)
- 8% Online Homework Assignments (assigned in class)
- Grades will be rounded up from the *second* decimal point, e.g. 90.95 rounds up to 91.0 while 90.94 rounds down to 90.90. In the event that eLION does not allow for a particular grade (e.g. D+), you will simply be given the letter grade (e.g. if you have a D+ then you will receive a D, and if you have a C–, you will receive a C).

A: 91–100%;	C+: 79.0–79.9	F: 0–59.9
A–: 90.0–90.9	C: 71.0–77.9	<a href="#">INCOMPLETE</a>
B+: 89.0–89.9	C–: 70–70.9	<a href="#">DROP</a>
B: 81.0–88.9	D+: 69.0–69.9	
B–: 80–80.9	D: 60.0–68.9	

### III. Explanation of Tests, Notebook Examinations, and Online Homework

- **Tests (72%)**
  - There are four tests, all of which will require you to know logical terminology, perform proofs, and will cover the content covered in class, homework, and in handouts available via Angel.
- **Examinations of Notebooks (20%)**
  - You are required to do the exercises specified above in the Reading List. While you are not required to specifically keep a notebook, you are required to keep an organized set of your work. This will be collected at specified times in the semester and reviewed mostly for *completeness*. In order to receive full points, it is not necessary that you (1) did all the exercises correctly, nor (2) that you did 100% of the exercises. A helpful guideline concerning *organization and assessment* of these notebooks is in your course packet.
- **Online Homework (8%)**
  - There will be a few homework assignments. These will be basic (mostly conceptual) assessments and will be administered via ANGEL. These will be assigned *during class*. There will be no make-up.

### IV. Logic Tutors

Through the course of the semester, you may decide you need additional tutoring. The following are a list of friendly students who have done exceptionally well in symbolic logic courses I have taught in the past. Contact them about their hours and the cost of their assistance. The following tutors will be able to provide

you assistance with propositional and predicate logic (tables, translation, proofs) and the alpha part of existential graphs.

Sarah Mack: [sem5105@psu.edu](mailto:sem5105@psu.edu)

Karintha Parker: [kcp5018@psu.edu](mailto:kcp5018@psu.edu)

Kristin Nuss: [kmn5024@psu.edu](mailto:kmn5024@psu.edu)

## V. Additional Administrative Information

### 1. *Academic Misconduct*

The general principles and policy relating to cheating and plagiarism, which are enforced in this class, can be found in the Penn State policy on academic misconduct. *Academic Integrity*: Academic dishonesty encompasses a wide range of activities, whether intentional or unintentional, that includes, but is not limited to: all forms of fraud, plagiarism, and any failure to cite explicitly all materials and sources used in one's work. Sanctions for these activities include, but are not limited to, failure in a course, removal from the degree program, failure in a course with an explanation in the permanent transcript of the cause for failure, suspension, and expulsion. If you are unclear about whether you or someone you know is engaging in academic misconduct, read the following: [University Statement on Academic Integrity](#)

#### 1.1 *Other Resources on Academic Misconduct*

[PSU Academic Integrity](#)

[PSU ITS:](#)

[Plagiarism Tutor](#)

[Turnitin](#)

[PSU Teaching & Learning with Technology](#)

### 2. *Disability*

If you have a documented disability and wish to receive academic accommodations, please contact the campus disability liaison as soon as possible: (name, office, telephone, email). For additional information, check the university web site for [Disability Services](#).

### 3. *Resources to Help with Research, Writing, Documentation, and Citation*

[Information Literacy Tutorial](#)

[University Learning Center](#)

[Writing Center](#)

### 4. *Use of Angel and email communication*

Please check the webpage on the [ANGEL](#) website regularly. An online version of the syllabus is available there, and you will be notified of any cancellation of a course meeting there. If you need to contact me, send a well-constructed email to [dwa132@psu.edu](mailto:dwa132@psu.edu) with an appropriate subject line (e.g. P120 Question) and with an appropriate address (e.g. "Dear David"). Failure to do either, or emailing me with multiple links attached ("check this youtube link") will result in your instructor deleting your email. Students are responsible for activity on their computer accounts so only send emails pertinent to the course. Also, please do not send correspondence from cellular telephones (e.g. Blackberries, etc.).

### 5. *Drop procedures and Incompletes*

Students who simply stop attending class, for whatever reason, without officially withdrawing from the course, will receive the grade of F. If you expect a refund, be aware that the date the withdrawal form is processed by Penn State registrar's office determines the amount of refund.

Consult the Register site for [drop procedures](#)

Consult the Handbook for taking an [Incomplete \(D/F\)](#)

### 6. *Student Guidance*

If you are in need of psychological counseling, please do not hesitate to contact Penn State's [Counseling & Psychological Services](#) (phone: 814-863-0395). For any problem related to your studies, university policies and procedures, do not hesitate to seek the help of the [Student Affairs Services](#), your Academic

Advisor, or arrange a meeting with your instructor who will help you obtain assistance through one of the above, or another, agency.

7. *Classroom Environment*

A number of factors figure into creating a healthy classroom environment. In order to facilitate such an environment, I ask you to obey the following: (1) the use of cell phones in any capacity is prohibited (please turn ringers/buzzers off, no text-messaging during class), (2) please do not begin to 'pack up' your belongings before your instructor has *explicitly* dismissed you, (3) please come to class rested, sleeping in class is strictly prohibited, (4) please do not do other work in class. If you are incapable of performing (1)–(4) or are disruptive in class, you will kindly be asked to leave the classroom.

8. *Challenge Examination*

For some courses, students may request a [challenge examination](#) as a substitute for completing the usual requirements of a course. If the examination is successfully completed the credits received are described as "credits by examination" ([policy 42-50](#)).

**Elements of this syllabus are subject to modification due to unforeseen variables, catastrophic events, or other factors. The instructor will announce any of these changes in class.**