



# COURSE OUTLINE UPDATE

## Section I: BASIC COURSE INFORMATION

OUTLINE STATUS: **Course Update**, 2005-2006

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1. **COLLEGE:** Los Angeles Southwest College

2. **SUBJECT (DISCIPLINE) NAME<sup>1</sup>:** Philosophy  
(40 characters, no abbreviations)

3. **COURSE NUMBER:** 8

4. **COURSE TITLE:** Deductive Logic

5. **UNITS:** 3

6. **CATALOG COURSE DESCRIPTION** -- Provide a description of the course, including an overview of the topics covered:

This introductory logic class, which is open to all students, is designed to develop the student's ability to think critically and to reason correctly. Attention will be given to both formal and informal logic.

7. **CLASS SCHEDULE COURSE DESCRIPTION** -- Provide a brief description of the course, including an overview of the topics covered:

This introductory logic class, which is open to all students, is designed to develop the student's ability to think critically and to reason correctly. Attention will be given to both formal and informal logic.

8. **COLLEGE COURSE APPROVAL DATE:** 1976  
**COLLEGE OUTLINE APPROVAL DATE:** 3/21/2006

9. **PREVIOUS UPDATES** (check all applicable boxes):

- |  |                              |
|--|------------------------------|
| <input checked="" type="checkbox"/> <b>Content</b>                               | <b>Previous Update: 2001</b> |
| <input checked="" type="checkbox"/> <b>Objectives</b>                            | <b>Previous Update: 2001</b> |
| <input type="checkbox"/> <b>College Specific Course Attributes/Data Elements</b> | <b>Previous Update:</b>      |
| <input type="checkbox"/> <b>Districtwide Course Attributes/Data Elements</b>     | <b>Previous Update:</b>      |
| <input checked="" type="checkbox"/> <b>Other (describe)</b>                      | <b>Previous Update:</b>      |

Change in course description

<sup>1</sup> Underlined course attributes are the same for the course throughout the LACCD; all other course attributes are college specific.

**10. CLASS HOURS:**

|                              | "Standard Hours" per Week (based on 18 weeks) | Total Hours per Term (hrs per week x 18) | Units |
|------------------------------|---|--|-------|
| Lecture:                     | 3   | 54                                       | 3     |
| Lab/activity (w/ homework):  |   |  |       |
| Lab/activity (w/o homework): |   |  |       |
| Total:                       | 3   | 54                                       | 3     |

**Note:** The Carnegie Rule and Title 5, section 55002 sets forth the following minimum standards: 1 unit = 1 hour lecture per week, 2 hours homework per week; **OR** 2 hours per week of lab with homework; **OR** 3 hours of lab per week without homework. The hours per week are based on a standard 18-week calendar. Lecture also includes discussion and/or demonstration hours, laboratory includes activity and/or studio hours.

**11. PREREQUISITES, COREQUISITES, ADVISORIES ON RECOMMENDED PREPARATION, and LIMITATION ON ENROLLMENT**

**Note:** The LACCD's *Policy on Prerequisites, Corequisites and Advisories* requires that the curriculum committee take a separate action verifying that a course's prerequisite, corequisite or advisory is an "appropriate and rational measure of a student's readiness to enter the course or program" and that the prerequisite, corequisite or advisory meets the level of scrutiny delineated in the policy.

**ENTRY SKILLS FOR COURSES WITH PREREQUISITES:**

. Prerequisites: **None** (If Yes, complete information below)

| Subject | Number | Course Title | Units | Validation Approval Date (official use only) |
|---------|--------|--------------|-------|--|
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|         |        |              |       |  |
|         |        |              |       |  |

. Corequisite: **None** (If Yes, complete information below)

| Subject | Number | Course Title | Units | Validation Approval Date (official use only) |
|---------|--------|--------------|-------|--|
|         |        |              |       |  |
|         |        |              |       |  |
|         |        |              |       |  |

. Advisories: **None** (If Yes, complete information below)

| Subject | Number | Course Title | Units | Validation Approval Date (official use only) |
|---------|--------|--------------|-------|--|
|         |        |              |       |  |



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**12. REPETITIONS** -- Number of times course may be repeated for credit (three maximum): 0 (see: Section V, #9)

**13. OTHER LIMITATIONS ON ENROLLMENT** (see Title 5, Section 58106 and Board Rule 6803 for policy on allowable limitations. Other appropriate statutory or regulatory requirements may also apply):

|      |
|------|
| None |
|------|

## Section II: COURSE CONTENT AND OBJECTIVES

### 1. COURSE CONTENT AND OBJECTIVES:

| COURSE CONTENT AND SCOPE – <b>Lecture:</b><br><u>If applicable</u> , outline the topics included in the lecture portion of the course ( <i>outline reflects course description, all topics covered in class</i> ).  | Hours per topic | COURSE OBJECTIVES - <b>Lecture</b> ( <i>If applicable</i> ):<br>Upon successful completion of this course, the student will be able to... ( <i>Use action verbs – see Bloom’s Taxonomy below for “action verbs requiring cognitive outcomes.”</i> ) |
|---|-----------------|---|
| 1) Introduction to the course <ul style="list-style-type: none"> <li>a) Syllabus: what is it?                             <ul style="list-style-type: none"> <li>i) A contract between instructor &amp; student</li> <li>ii) As a contract, mutually binding</li> </ul> </li> <li>b) Course description</li> <li>c) Course requirements and grading policy</li> <li>d) Student obligations:                             <ul style="list-style-type: none"> <li>i) Sit for scheduled exams (except for dire emergency &amp; by prior contact with instructor)</li> <li>ii) Academic honesty</li> <li>iii) Keep current with the course (even in case of occasional absence)</li> </ul> </li> <li>e) Study techniques</li> <li>f) Discussion &amp; communication                             <ul style="list-style-type: none"> <li>i) It is ALWAYS time for discussion in philosophy class!</li> <li>ii) Exchange phone numbers &amp; form study groups</li> <li>iii) Ask the instructor                                     <ul style="list-style-type: none"> <li>(1) contact by email is rewarded with the promptest response</li> <li>(2) check the instructor’s website</li> <li>(3) instructor’s office hours</li> <li>(4) instructor’s home phone, use but with discretion</li> </ul> </li> </ul> </li> </ul> | 1               |   |
| 2) Background: Logic, culture, and humanity <ul style="list-style-type: none"> <li>a) Logic key to critical thought                             <ul style="list-style-type: none"> <li>i) Logic fulfills critical thought requirement for graduation</li> <li>ii) Critical thought important to acquiring liberal education</li> <li>iii) Critical thought preferred in modern culture                                     <ul style="list-style-type: none"> <li>(1) the idea of modernity</li> <li>(2) citizenship, modernity and rational-legal political authority</li> <li>(3) modernity and the knowledge-based society</li> </ul> </li> </ul> </li> <li>b) Anthropology: logic and humanity                             <ul style="list-style-type: none"> <li>i) Logic and language, distinguishing hallmarks of being human</li> </ul> </li> </ul>   | 6               | 1. Identify critical thinking and discuss why critical thinking is important to liberal education.  |

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| <ul style="list-style-type: none"> <li>ii) Logic and problem-solving, characteristic perhaps of all life</li> <li>iii) Is logic humanly universal?             <ul style="list-style-type: none"> <li>(1) The Savage Mind</li> <li>(2) "The Laws of Thought"</li> <li>(3) Children &amp; logic</li> <li>(4) Alternative logics? (Deviant? Fuzzy?)</li> </ul> </li> <li>c) Critical thought not an anthropological universal             <ul style="list-style-type: none"> <li>i) Thinking as such is an anthropological universal</li> <li>ii) But, philosophy is narrower &amp; rarer</li> <li>iii) Modern rational-legal culture is anthropologically weird in                 <ul style="list-style-type: none"> <li>(1) preferring &amp; encouraging critical reason</li> <li>(2) requiring it in mass education</li> </ul> </li> </ul> </li> <li>d) Logic part of the discipline of philosophy             <ul style="list-style-type: none"> <li>i) Most students have no prior philosophy (unlike English, history, etc.)</li> <li>ii) Logic is weird                 <ul style="list-style-type: none"> <li>(1) uncharacteristically, the most technical bit in philosophy</li> <li>(2) logic textbooks look like math textbooks</li> </ul> </li> <li>iii) but the techniques only have a point against                 <ul style="list-style-type: none"> <li>(1) the history of modern culture &amp; preference for critical thought</li> <li>(2) the history of Western thought including philosophy</li> <li>(3) therefore if techniques are studied in historical vacuum, much will be missed</li> </ul> </li> <li>iv) What is philosophy?                 <ul style="list-style-type: none"> <li>(1) P1: nothing less than the Western tradition of rational inquiry, as such</li> <li>(2) P2: that specialized discipline in the Humanities treating problems of metaphysics, ethics, and epistemology</li> </ul> </li> <li>v) Logic is part of the 3<sup>rd</sup> branch, epistemology</li> </ul> </li> <li>e) Three philosophical problems pertinent to logic &amp; epistemology             <ul style="list-style-type: none"> <li>i) What is the source of our knowledge (reason, experience, or both)?</li> <li>ii) What sorts of propositions can there be (analytic, synthetic)?</li> <li>iii) What is the point of our knowledge (certainty, or error-reduction)?</li> </ul> </li> <li>3) Basic Concepts of Logic             <ul style="list-style-type: none"> <li>a) Logic, study of argument                 <ul style="list-style-type: none"> <li>i) argument: linguistic vs. sociological definition</li> <li>ii) Argument: group of</li> </ul> </li> </ul> </li> </ul> | <p>16</p> | <p>2. Define logic, distinguishing between a linguistic &amp; a sociological/psychological definition of argument.</p> |
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| <p>propositions/statements,<br/>                 (1) one or more (premise/s) of which support(s)<br/>                 (2) one of the others (conclusion)</p> <p>iii) propositions, statements &amp; sentences<br/>                 (1) sentence: subject &amp; predicate<br/>                 (2) statement: sentence with truth-value (T or F)<br/>                 (3) proposition: information content of a statement<br/>                 (4) opinion: merely the psychological aspect of statement<br/>                 (a) conveys neither truth, nor falsity<br/>                 (b) noting the fact of opinion has no logical importance</p> <p>iv) premises &amp; conclusions<br/>                 (1) premises: reasons for conclusion<br/>                 (2) conclusion: what is inferred by reason of the premises<br/>                 (3) factual statement plus inferential statement<br/>                 (4) difference between premise &amp; conclusion?</p> <p>v) "group:" minimum 2 statements<br/>                 (1) immediate inference<br/>                 (2) syllogism ("standard form of deductive argument") uses 3 statements<br/>                 (3) in practice, most arguments have MANY premises</p> <p>vi) Logical order vs. speech/rhetorical order<br/>                 (1) One the reverse of the other<br/>                 (2) Logic vs. rhetoric<br/>                 (3) Indicator words</p> <p>vii) Deduction vs. Induction<br/>                 (1) Two axes of distinction<br/>                 (a) Certainty vs. probability<br/>                 (b) Reach of conclusion<br/>                 (2) One way in which NOT to differentiate them: universal vs. particular</p> <p>viii) Validity &amp; Soundness; Strength &amp; Cogency<br/>                 (1) Induction: allegedly, true premises + strong reasoning yields cogent argument<br/>                 (2) Examples of induction<br/>                 (a) Analogy<br/>                 (b) Induction by enumeration (polls, swans)<br/>                 (3) Deduction: true premises + valid form yields sound argument</p> <p>ix) Concept of validity:</p> |  | <p>3. Employ premises &amp; conclusions to demonstrate an inference.</p> <p>4. Define syllogism and construct one or more syllogisms.</p> <p>5. Distinguish logical order from speech order. Show how inference is possible under each.</p> <p>6. Demonstrate 2 distinct ways to distinguish induction from deduction. Indicate how they are related.</p> <p>7. Define validity, soundness, strength, &amp; cogency, being careful to distinguish the concept of validity (including the ideas of formal and informal fallacy) from the concept of truth-value.</p> |
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| <p>(1) SINGLE MOST IMPORTANT CONCEPT in deductive logic</p> <p>(2) Also, the single most DIFFICULT concept</p> <p>(3) “term of art” different from colloquial meaning</p> <p>(4) distinct from (though coordinate with) the concept of truth</p> <p>(5) Validity is a property of FORM; truth is a property of content.</p> <p>(a) statements may be true or false (but never valid nor invalid).</p> <p>(b) forms may be valid, or invalid</p> <p>(6) hear “form,” think: “syllogism” (“standard FORM of deductive argument”).</p> <p>(7) Of the deductive forms, validity is most easily illustrated through the conditional syllogism</p> <p>x) Types of syllogisms</p> <p>(1) Disjunctive: “or”</p> <p>(2) Categorical: “all,” “none,” “some”</p> <p>(a) overwhelming number: harder to introduce validity</p> <p>(b) Later, apply concept of validity</p> <p>(3) Conditional syllogisms: “if-then”</p> <p>(a) Antecedent &amp; consequent</p> <p>(b) merely 4: 2 valid, 2 invalid</p> <p>(c) therefore easiest to learn validity with these 4</p> <p>xi) Validity illustrated via conditional syllogisms</p> <p>(1) Validity: that property of a deductive argument, such that IFF all relevant premises are true, it is impossible for the conclusion to be false</p> <p>(a) Therefore there are no examples of valid forms with true premises producing false conclusions;</p> <p>(b) But valid forms with false premises, or invalid forms with true or false premises, are INDETERMINATE re: truth value of their conclusions</p> <p>(2) Implied test for validity: substitution instances, counterexample</p> <p>(a) Asymmetry of truth &amp; falsity</p> <p>(b) The Dreaded Counterexample</p> <p>(c) A single counterexample refutes any unrestricted generalization (e.g., the form in question is valid)</p> |  |  |
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| <p>(d) Once invalid, always invalid<br/>         (e) (Valid only means “not yet proven invalid”)</p> <p>(3) Testing the 4 conditional forms for validity:<br/>         (a) <b>Modus ponens</b><br/>         (b) <b>Modus tollens</b><br/>         (c) (fallacy of) affirming the consequent<br/>         (d) (fallacy of) denying the antecedent</p> <p>(4) Validity means reliability; once a thief, always a thief</p> <p>xii) Concept of invalidity (<i>aka</i> fallacy)<br/>         (1) any defect in reasoning due to something other than merely false premises<br/>         (2) formal fallacy: eyeball the form (syllogism)<br/>         (3) informal fallacy: detection is less obvious</p> <p>xiii) History of induction &amp; deduction<br/>         (1) Deduction: virtues (Aristotle), vices (Bacon)<br/>         (2) Induction: virtues (Bacon), vices (Hume, Popper)<br/>         (3) Induction taken for philosophy of science<br/>         (4) Popper on induction &amp; science<br/>         (a) Science uses deduction to test theories<br/>         (b) Induction: just a special case of invalid deduction</p> <p>4) Language: Meaning and Definition<br/>         a) Aristotle: Man is ζων πολιτικον και λογον εχον<br/>         i) language unique to <i>homo sapiens</i>, &amp; definitive<br/>         ii) 2,000+ year lacuna<br/>         b) 19<sup>th</sup>-20<sup>th</sup> cc.: interest revived in language<br/>         i) Boole, Carroll, Russell<br/>         ii) logical positivism: stop talking rubbish<br/>         iii) How to Do Things With Words<br/>         iv) de Sassure to Chomsky (“Cartesian linguistics”)<br/>         c) sense &amp; reference<br/>         i) symbols: stand for (point to) other things<br/>         ii) terms as symbols<br/>         iii) sense (intension of terms, denotation)<br/>         iv) reference (extension of terms, connotation)<br/>         v) Queens &amp; unicorns: can there be empty extension?</p> | <p>6</p> | <p>8. Outline the topic of language in philosophy from Aristotle to the 20<sup>th</sup> c., paying particular attention to the sense-reference distinction, to the quality of ambiguity in natural language, and to the claim “poetry is not the enemy.”</p> |
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| <p>d) ambiguity in language</p> <ul style="list-style-type: none"> <li>(1) ambiguity vs. other types of unclarity</li> <li>(2) ambiguity: natural language vs. symbolic logic</li> <li>(3) avoidance of ambiguity</li> <li>(4) the uses of ambiguity</li> <li>(5) is poetry the enemy?</li> </ul> <p>e) Definition, from Socrates to Popper</p> <p>5) Informal Fallacies</p> <ul style="list-style-type: none"> <li>a) Review definition of fallacy (any defect in argument not due merely to false premises)</li> <li>b) Informal fallacies             <ul style="list-style-type: none"> <li>i) also not due merely to false premises</li> <li>ii) but not so obviously eyeballed as formal fallacies</li> </ul> </li> <li>c) nevertheless not entirely unsystematic             <ul style="list-style-type: none"> <li>i) they can be classified into groups</li> <li>ii) they impede good reasoning</li> <li>iii) (often they are sneaky ways of shutting off debate)</li> <li>iv) but they have their limits too                 <ul style="list-style-type: none"> <li>(1) e.g. not all appeals to authority are illegitimate</li> <li>(2) e.g. some slopes really are slippery</li> </ul> </li> </ul> </li> <li>d) fallacy group: of relevance</li> <li>e) fallacy group: of weak induction</li> <li>f) fallacy group: of presumption</li> <li>g) fallacy group: of ambiguity</li> <li>h) fallacy group: of grammatical analogy</li> </ul> | 8 |   |
| <p>6) Categorical Propositions</p> <ul style="list-style-type: none"> <li>a) Categories             <ul style="list-style-type: none"> <li>i) All, Some, or No(ne)</li> <li>ii) Categories as sets</li> <li>iii) Euler diagrams</li> </ul> </li> <li>b) Components of categorical proposition             <ul style="list-style-type: none"> <li>i) Subject term (S) &amp; predicate term (P)</li> <li>ii) Quantifier (all, some or none)</li> <li>iii) Copula (3<sup>rd</sup> person plural -- sets may have plural members)</li> <li>iv) Standard form: subject (q &amp; S) and predicate (c &amp; P)</li> </ul> </li> <li>c) Quality, quantity &amp; distribution             <ul style="list-style-type: none"> <li>i) Quality: affirmative vs. negative</li> <li>ii) Quantity: universal vs. particular</li> <li>iii) 4 standard form permutations: A, E, I, O</li> <li>iv) Distribution: for S &amp; P, does the form make reference to each member of the class denoted by the term, or not? (mnemonics UsNp; AsEbInOp)</li> </ul> </li> <li>d) Venn diagrams for propositions: standard techniques</li> </ul>  | 6 | <p>9. Distinguish the informal fallacy groups: of relevance, of weak induction, of presumption, of ambiguity, of grammatical analogy.</p> |

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| <p>i) Property spaces 1-4</p> <p>ii) For standard forms, mark only 1 or 2 (S circle)</p> <p>iii) Marks for S:</p> <p>(1) Shade universals (shade means empty)</p> <p>(2) X particulars (x means there is at least one S)</p> <p>e) Squares of opposition</p> <p>i) Modern/Boolean: universals never have existential import</p> <p>ii) Aristotelian: universals may have existential import</p> <p>(1) Contradictory</p> <p>(2) Contrary</p> <p>(3) Subcontrary</p> <p>(4) Subalternation</p> <p>f) Conversion, obversion, contraposition</p> <p>i) These 3 transforms</p> <p>(1) result from modifying standard forms by following distinctive rules</p> <p>(2) require uniquely eccentric extensions of standard Venn techniques (mark property spaces 3 &amp; 4, not just 1 &amp; 2)</p> <p>(3) Identical Venns for form &amp; transform = logical equivalence (both have same meaning, therefore also same truth-value)</p> <p>(4) Differing Venns = indeterminate truth value</p> <p>ii) Concept: term complements</p> <p>iii) 3 transforms &amp; their rules</p> <p>(1) converse</p> <p>(a) switch S &amp; P</p> <p>(b) result: only E &amp; I produce logical equivalence (mnemonic convErsIon)</p> <p>(2) obverse</p> <p>(a) change quality</p> <p>(b) replace P with term complement</p> <p>(c) result: A, E, I, &amp; O all produce logical equivalence</p> <p>(3) contrapositive</p> <p>(a) switch S &amp; P</p> <p>(b) replace S &amp; P with term complements</p> <p>(c) result: only A &amp; O produce logical equivalence (mnemonic contrApOsition)</p> <p>7) Categorical Syllogisms</p> <p>a) Standard form</p> <p>i) 3 standard form categorical propositions</p> | <p>8</p> |  |
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| <ul style="list-style-type: none"> <li>ii) terms             <ul style="list-style-type: none"> <li>(1) major: P in conclusion, once in major premise</li> <li>(2) minor: S in conclusion, once in minor premise</li> <li>(3) middle: M, once in each premise, never in conclusion</li> <li>(4) recall: any term in conclusion must appear in a premise</li> </ul> </li> <li>b) Figure &amp; mood             <ul style="list-style-type: none"> <li>i) Why? Only 4 conditionals, but 256 categoricals                 <ul style="list-style-type: none"> <li>(1) In middle ages, memorize 256 personal names like “bArbArA”</li> <li>(2) Today, logical shorthand to identify each uniquely</li> </ul> </li> <li>ii) Mood: A, E, I, O names of each the 3 propositions</li> <li>iii) Figure: 1-4 depending on M (shirt-collar mnemonic)</li> <li>iv) Thus for example AAA-1 is the unique descriptor for “bArbArA;” 3 A propositions with M in position 1</li> </ul> </li> <li>c) Venn diagrams for the syllogism: techniques             <ul style="list-style-type: none"> <li>i) Same techniques as for propositions: shade universals, x particulars</li> <li>ii) New rule: given a choice, shade universals first</li> <li>iii) 3 circles for syllogism vs. 2 circles for simple proposition                 <ul style="list-style-type: none"> <li>(1) seemingly, 8 property spaces not 4</li> <li>(2) but in effect, syllogism is really 3 groups of 2</li> </ul> </li> <li>iv) mark them in groups of 2: P &amp; M, then S &amp; M</li> <li>v) do NOT mark S &amp; P directly but just eyeball the result</li> </ul> </li> <li>d) Venn as a test for validity             <ul style="list-style-type: none"> <li>i) For propositions, Venn merely a hieroglyph</li> <li>ii) But for syllogisms, Venn a machine for testing validity</li> <li>iii) test: if resulting S &amp; P diagram says at least as much as S &amp; P diagram says for conclusion, then if inference is valid; if not, then invalid</li> </ul> </li> <li>e) 3 tests for validity             <ul style="list-style-type: none"> <li>i) universal test: substitution instance &amp; counterexample (all syllogisms)</li> <li>ii) Venn (categoricals only)</li> <li>iii) 5 rules (categoricals only)</li> </ul> </li> <li>8) Summary &amp; review, including final exam</li> </ul> | <p>3</p> | <p>10. Apply your understanding of Venn techniques for categorical propositions, by extension, to diagram categorical syllogisms as well.</p> <p>SLO 1: As a result of this learning experience, the student can define logic and appraise the role of argument and critical thinking in a liberal education.</p> <p>SLO 2: As a result of this learning experience, the student can define the concept of formal validity as well as the concept of fallacy (whether formal or informal).</p> <p>SLO 3: As a result of this learning experience, the student can apply standard techniques of deductive reasoning (including syllogisms and Venn diagrams) to analyze arguments for their validity, and conclusions for their truth-value.</p> |
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| Total <b>Lecture</b> hours* | 54 |  |

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| <b>COURSE CONTENT AND SCOPE -- Laboratory:</b><br>If applicable, outline the topics included in the laboratory portion of the course ( <i>outline reflects course description, all topics covered in class</i> ). | Hours per Topic | <b>COURSE OBJECTIVES - Laboratory (If applicable):</b><br>Upon successful completion of this course, the student will be able to... ( <i>Use action verbs – see Bloom’s Taxonomy below for “action verbs requiring cognitive outcomes.”</i> ) <sup>2</sup> |
|   |                 |  |
| Total <b>Lab</b> hours*   | 0               |  |

\*Total lecture and laboratory hours (which include the final examination) must equal totals on page 1.

### Bloom’s Taxonomy

| SIMPLE SKILLS <<----->> COMPLEX SKILLS |               |             |                   |           |            |
|--|---------------|-------------|-------------------|-----------|------------|
|  |               |             | Critical Thinking |           |            |
| Knowledge                              | Comprehension | Application | Analysis          | Synthesis | Evaluation |
| define                                 | translate     | interpret   | distinguish       | compose   | judge      |
| repeat                                 | restate       | apply       | analyze           | plan      | appraise   |
| record                                 | discuss       | employ      | differentiate     | propose   | evaluate   |
| list                                   | describe      | use         | appraise          | design    | rate       |
| recall                                 | recognize     | demonstrate | calculate         | formulate | compare    |
| name                                   | explain       | dramatize   | experiment        | arrange   | value      |
| relate                                 | express       | practice    | test              | assemble  | revise     |
| underline                              | identify      | illustrate  | compare           | collect   | score      |
|  | locate        | operate     | contrast          | construct | select     |
|  | report        | schedule    | criticize         | create    | choose     |
|  | review        | shop        | diagram           | set up    | assess     |
|  | tell          | sketch      | inspect           | organize  | estimate   |
|  |               |             | debate            | prepare   | measure    |
|  |               |             | inventory         |           |            |
|  |               |             | question          |           |            |
|  |               |             | relate            |           |            |
|  |               |             | solve             |           |            |
|  |               |             | examine           |           |            |
|  |               |             | categorize        |           |            |

### 2. REQUIRED TEXTS:

Provide a representative list of textbooks and other required reading; include author, title and date of publication:

Patrick J. Hurley, **A Concise Introduction to Logic**, 9<sup>th</sup> Edn. (Belmont, CA: Thomson/Wadsworth) 2006

### 3. SUPPLEMENTARY READINGS:

Reading assignments may include, but are not limited to the following:

<sup>2</sup> In general “activity” courses or portions of courses are classified “laboratory.”

1.) William & Martha Kneale, **The Development of Logic** (Oxford: Clarendon Press, 1962); Wesley C. Salmon, **Logic**, 2<sup>nd</sup> Edn (Englewood Cliffs: Prentice-Hall, 1973); Karl R. Popper, **The Logic of Scientific Discovery** (NY: Harper & Row, 1959); Aristotle, **Prior Analytics**; Lewis Carroll, **Symbolic Logic and the Game of Logic** (NY: Dover, 1958); George Boole, **An Investigation into the Laws of Thought** (NY: Dover, 1958, orig. 1854); Claude Levi-Strauss, **The Savage Mind** (University of Chicago, 1963); Bärbel Inhelder & Jean Piaget, **The Growth of Logical Thinking from Childhood to Adolescence** (NY: Basic Books, 1958); Susan Haack, **Deviant Logic, Fuzzy Logic: Beyond the Formalism** (University of Chicago, 1996); David Hackett Fischer, **Historians' Fallacies: Toward a Logic of Historical Thought** (New York: Harper & Row, 1970).

2.) Key overheads used in class lectures are distributed liberally as class handouts.

#### 4. WRITING ASSIGNMENTS:

Title 5, section 55002 requires grades to be "based on demonstrated proficiency in subject matter and the ability to demonstrate that proficiency, at least in part, by means of essays or, in courses where the curriculum committee deems them to be appropriate, by problem solving exercises or skills demonstrations by students." Writing assignments in this course may include, but are not limited to the following:

Preparation by each student of end-of-term essay, ca. 500 words, summarizing the course. Exam questions requiring problem-solving exercises using techniques of the syllogism and Venn diagrams. Short-answer bonus on final describing a chosen philosopher and discussing one of his key ideas.

#### 5. REPRESENTATIVE OUTSIDE ASSIGNMENTS:

Out of class assignments may include, but are not limited to the following:

Consultation of library reserve list. Use of major secondary sources. Use of supplementary software provided with required text. Use of internet resources.

#### 6. REPRESENTATIVE ASSIGNMENTS THAT DEMONSTRATE CRITICAL THINKING:

Title 5, section 55002(a) requires that a degree-applicable course have a level of rigor that includes "critical thinking and the understanding and application of concepts determined by the curriculum committee to be at college level". Critical thinking may include, but is not limited to analysis, synthesis, and evaluation. Provide examples of assignments that demonstrate critical thinking.

Production of syllogisms to demonstrate validity & invalidity of argument. Identifications of fallacies (i.e., defects in argument) whether formal or informal. Construction of Venn diagrams to test for formal fallacy.

#### 7. METHODS OF EVALUATION:

Title 5, section 55002 requires grades to be "based on demonstrated proficiency in subject matter and the ability to demonstrate that proficiency, at least in part, by means of essays, or, in courses where the curriculum committee deems them to be appropriate, by problem solving exercises or skills demonstrations by students." Methods of evaluation may include, but are not limited to the following (please note that evaluation should measure the outcomes detailed "Course Objectives" at the beginning of Section II):

Examination questions to assess basic knowledge & comprehension, including vocabulary and terms of art distinctive to philosophy, especially epistemology and logic; also application of techniques of logic (including syllogisms & Venn diagrams). Appraisal of essay to assess

critical thinking skills in analysis, synthesis & evaluation.

**8. METHODS OF INSTRUCTION:**

Methods of instruction may include, but are not limited to the following:

- Lecture
- Discussion
- Laboratory
- Activity
- Field Experience
- Independent Study
- Other (explain)

**9. SUPPLIES:**

List the supplies the student must provide.

**10. COMPUTER COMPETENCY:**

If applicable, explain how computer competency is included in the course.

Gently & gradually. Internet resources are suggested for use but not required; likewise specialized logic software available a supplement to the textbook; course information is provided on the instructor's website among other sources; email communication with instructor is rewarded by prompt response.

**11. INFORMATION COMPETENCY:**

Information competency is the ability to find, evaluate, use, and communicate information in all its various formats. It combines aspects of library literacy, research methods and technological literacy. Information competency includes consideration of the ethical and legal implications and requires the application of both critical thinking and communications skills. If applicable, explain how information competency is included in the course.

The emphasis in this course is, *given* information (or what purports to be information), how does one evaluate 1.) any truth-value in its claims, and 2.) the reliability of the reasoning process (in other words, formal validity) by which the purported information was reached. This is of course to say that logic is closely bound to the promotion of critical thinking in the liberally-educated person.

**12. DIVERSITY:**

If applicable, explain how diversity (e.g., cultural, gender, etc.) is included in the course.

There has always been a classical case to be made that logical reasoning (unlike philosophy in general) is an anthropological universal, hence knows no limits such as culture or gender. In recent times there has been some discussion of variant logics. While there is something to be said regarding necessary cultural supports for critical reasoning and for self-conscious use of logic as learned indeed developmental, there remains good reason to think that the availability of logical reasoning is and ought to be universal to all human beings (without regard to differences such as culture, ethnicity, or gender)

**13. SCANS COMPETENCIES (required for all courses with vocational TOP Codes; recommended for all courses):**

SCANS (**S**ecretary's **C**ommission on **N**ecessary **S**kills) are skills the Department of Labor identified, in consultation with business and industry leaders, which reflect the skills necessary for success in the workplace. Check the appropriate boxes to indicate the areas where students will develop the following skills (please note that all SCANS competencies do not apply to all courses):

*RESOURCES*

- Managing Time:** Selecting relevant goal-related activities, ranking them in order of importance, allocating time to activities, and understanding, preparing and following schedules.
- Managing Money:** Using or preparing budgets, including making cost and revenue forecasts; keeping detailed records to track budget performance, and making appropriate adjustments.
- Managing Material and Facility Resources:** Acquiring, storing, allocating, and distributing materials, supplies, parts, equipment, space or final products in order to make the best use of them.

*INTERPERSONAL*

- Participating as Member of a Team:** Working cooperatively with others and contributing to group's efforts with ideas, suggestions and effort.
- Teaching Others New Skills:** Helping others learn needed knowledge and skills.
- Exercising Leadership:** Communicating thoughts, feelings, and ideas to justify a position, encouraging, persuading, convincing or otherwise motivating an individual or group, including responsibly challenging existing procedures, policies or authority.
- Negotiating:** Working toward agreement that may involve exchanging specific resources or resolving divergent interests.
- Working with Cultural Diversity:** Working well with men and women and with people from a variety of ethnic, social, or educational backgrounds.

*INFORMATION*

- Acquiring and Evaluating Information:** Identifying a need for data, obtaining the data from existing sources or creating them, and evaluating their relevance and accuracy.
- Organizing and Maintaining Information:** Organizing, processing and maintaining written or computerized records and other forms of information in a systematic fashion.
- Interpreting and Communicating Information:** Selecting and analyzing information and communicating the results of others, using oral, written, graphic, pictorial, or multimedia methods.
- Using Computers to Process Information:** Employing computers to acquire, organize, analyze and communicate information.

*SYSTEMS*

- Understanding Systems:** Knowing how social, organizational and technological systems work and operating effectively with them.
- Monitoring and Correcting Performance:** Distinguishing trends, predicting impacts of actions on system operations, diagnosing deviations in the functioning of a system/organization, and taking necessary steps to correct performance.

- Improving or Designs Systems:** Making suggestions to modify existing systems in order to improve the quality of products or services and developing new or alternative systems.

*TECHNOLOGY*

- Selecting Technology:** Judging which sets of procedures, tools or machines, including computers and their programs, will produce the desired results.
- Applying Technology to Tasks:** Understanding overall intent and proper procedures for setting up and operating machines, including computers and their reprogramming systems.
- Maintaining and Troubleshooting Equipment:** Preventing, identifying, or solving problems with equipment, including computers and other technologies.

### Section III: RELATIONSHIP TO COLLEGE PROGRAMS

1. **THIS COURSE WILL BE AN APPROVED REQUIREMENT FOR AN APPROVED ASSOCIATE DEGREE OR CERTIFICATE PROGRAM:** **Yes**

- a. If yes, the course will be a **"restricted" elective** portion of the "approved program" listed on the State Chancellor's Inventory of Approved Programs (approved programs can be found on the State Chancellor's Office website at <http://misweb.cccco.edu/esed/webproginv/prod/invmenu.htm>)

Restricted elective for AA in Psychology (Program ID # 02885)

NOTE: In order for a course to be approved as a requirement for an associate degree or certificate program, the program must be listed on the State Chancellor's Office *Inventory of Approved Programs* AND the course must be listed in the college catalog as either a requirement or an elective for the program. If course is not part of an approved program at the college adopting the course, it will be considered to be a "stand-alone" course, and is subject to the State Chancellor's approval criteria. The college must complete and submit the Chancellor's Office "APPLICATION FOR APPROVAL OF CREDIT" form. Certain courses are granted "blanket approval" by the State Chancellor's Office and do not require separate approval. See the Chancellor's Office *Program and Course Approval Handbook* for details. LACCD Skills **Certificates are not State approved programs** and are not listed on the Chancellor's Office *Inventory of Approved Programs*.

2. **GENERAL EDUCATION REQUIREMENTS FOR THE ASSOCIATE DEGREE STATUS:**

- a. Area requested: **d(2) Communications and Analytical Thinking** **Approval** date: BEFORE 1990

If applicable, provide an explanation of how the course meets the General Education parameters for one of the five general education areas – *Natural Sciences, Social and Behavioral Sciences, Humanities, Language and Rationality, Health and Physical Education* -- contained in Board Rule 6201.14 -General Education Requirements. [http://marlin.laccd.edu/district/BoardRules\\_AdmRegs/boardrules.htm](http://marlin.laccd.edu/district/BoardRules_AdmRegs/boardrules.htm)

- a. 2<sup>nd</sup> Area requested: **None** **Approval** date:

If applicable, provide an explanation of how the course meets General Education parameters for an additional general education area – *Natural Sciences, Social and Behavioral Sciences, Humanities, Language and Rationality, Health and Physical Education* -- contained in Board Rule 6201.14 - General Education Requirements. [http://marlin.laccd.edu/district/BoardRules\\_AdmRegs/boardrules.htm](http://marlin.laccd.edu/district/BoardRules_AdmRegs/boardrules.htm)

## Section IV: ARTICULATION INFORMATION

(Complete in consultation with College Articulation Officer)

### 1. TRANSFER STATUS:

- a. Transferable to the University of California: **Yes**      c. Transferable to the California State University: **Yes**  
b. UC **approval** date: before 1990      d. College **approval** date: before 1990

### 2. GENERAL EDUCATION FOR TRANSFER:

#### **IGETC Certification:**

- a. Area requested: **None**  
b. Date requested:  
c. IGETC **approval** date:

If applicable, provide an explanation of how the course meets the appropriate General Education parameters, as defined in IGETC Certification Guidelines.

#### **CSU Certification:**

- a. Area requested: **A-3: Critical Thinking**  
b. Date requested: **1989**  
c. CSU **approval** date: **1990**

If applicable, provide an explanation of how the course meets the appropriate General Education parameters, as defined in CSU Certification Guidelines.

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- a. 2<sup>nd</sup> Area requested: **None**  
b. Date requested:  
c. IGETC **approval** date:

If applicable, provide an explanation of how the course meets the appropriate General Education parameters, as defined in IGETC Certification Guidelines.

- a. 2<sup>nd</sup> Area requested: **None**  
b. Date requested:  
c. CSU **approval** date:

If applicable, provide an explanation of how the course meets the appropriate General Education parameters, as defined in CSU Certification Guidelines.

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### 3. CAN NUMBER: **PHIL 6**    CAN SEQUENCE NUMBER:

CAN Approval -- Date requested:      Date approved: **Spring 1997**

## Section V: SUPPLEMENTAL COURSE INFORMATION

1. **DEPARTMENT/DIVISION NAME:** The Arts
2. **DEPARTMENT/DIVISION CODE:** 01
3. **SUBJECT CODE** -- 3 characters, assigned by District Office: **722** (existing subject codes are available on the LACCD web site at <http://www.laccd.edu/curriculum/directory-programs-courses/index.htm>)
4. **SUBJECT ABBREVIATION** -- 7 characters, assigned by District Office: Philos
5. **SPC CODE** -- 3 characters, assigned by District Office:
6. **ABBREVIATION FOR TRANSCRIPTS** -- 20 characters, assigned by District Office: PHILOS
7. **DEGREE CREDIT:** Indicate whether the course meet the "standards for approval" for degree credit course set forth in Title 5, section 55002(a)(2), which requires the course to have a degree of intensity, difficulty, and vocabulary that the curriculum committee has determined to be at the college level :  
This courses is **Degree Applicable**
8. **CREDIT/NO CREDIT GRADING:** **No**
9. **REPETITIONS** -- Number of times course may be repeated for credit (three maximum): **0**

How does the repetition of this course meet Title 5, section 58161 requirements? A course may be repeatable when, "course content differs each time it is offered, and that the student who repeats it is gaining an expanded educational experience for one of the following reasons: (A) Skills or proficiencies are enhanced by supervised repetition and practice within class periods; or (B) Active participatory experience in individual study or group assignments is the basic means by which learning objectives are obtained."

10. **PRIOR TO TRANSFERABLE LEVEL** – This course attribute applies to **English, writing, ESL, reading** and **mathematics** courses ONLY. If applicable, indicate how many levels below the transferable level this course should be placed: **Not applicable**
11. **CREDIT BASIC SKILLS** -- Title 5, section 55502(d) defines basic skills as "courses in reading, writing, computation, and English as a Second Language, which are designated as non-degree credit courses pursuant to Title 5, section 55002(b)." **No** If Yes, course must be non-degree applicable.
12. **CROSS REFERENCE** -- Is this course listed as equivalent in content to existing College/District courses in another discipline? **No**

If Yes, list courses (documentation of cross-discipline agreement must be provided):

13. **COURSE SPECIFICALLY DESIGNED FOR STUDENTS WITH DISABILITIES** -- Title 5, section 56029 allows a course to be repeatable when continuing success of the students with disabilities is dependent on additional repetitions of a specific class. Is this course designated as an "approved special class" for students with disabilities? **No**

If yes, provide an explanation of how this course meets the requirements of Title 5, section 56029.

**14. COOPERATIVE EDUCATION STATUS** -- Title 5, section 55252 allows for two types of Cooperative Education: 1) General Work Experience Education -- i.e., supervised employment, which is intended to assist students in acquiring desirable work habits, attitudes and career awareness, which need not be related to the students' educational goals; or 2) Occupational Work Experience Education -- i.e., supervised employment, extending classroom based occupational learning at an on-the-job learning station, which is related to the students' educational or occupational goal. Is this course part of the college's approved cooperative work experience education program? **No**

**15. COURSE CLASSIFICATION:** **Liberal Arts Sciences**

Note: A course's Classification, TOP Code and SAM code must be aligned – e.g., Courses with an "Occupational" Course Classification must have an "Occupational" TOP Code **and** a SAM Code of A, B, C, or D; courses that do not have an "Occupational" Course Classification cannot have an Occupational TOP Code **and** must have an "E" SAM Code. Courses coded as "basic skills" in #11 should be coded "Adult and Secondary Basic Skills."

**16. TOP CODE – (6 digits XXXX.XX) 1509.00**

Course content should match discipline description in Taxonomy of Programs found at [www.cccco.edu/cccco/esed/curric/curriculum.htm](http://www.cccco.edu/cccco/esed/curric/curriculum.htm).

**17. SAM CODE (Student Accountability Model): E – Non-Occupational**

SAM Codes (see CCC Chancellor's Office *Student Accountability Model Operations Manual*, 1984) should be assigned as follows:

**Priority "A" – Apprenticeship:** Courses designed for an indentured apprentice must have the approval of the State of California, Department of Industrial Relations Department, Division of Apprenticeship Standards.

**Priority "B" – Advanced Occupational:** Courses taken by students in the advanced stages of their occupational programs. Courses should be offered in one specific occupational area only. Priority letter "B" should be assigned sparingly; in most cases, no more than two courses in any one program should be labeled "B." "B"-level courses must have Priority "C" prerequisites in the same program area.

**Priority "C" – Clearly Occupational:** Courses generally taken by students in the middle stages of their programs should have a difficulty level sufficient to detract "drop-ins." Courses may be offered in several occupational programs within a broad area. The "C" priority, however, should also be used for courses within a specific program area when the criteria for "B" classification are not met. A "C"-level course should provide the student with entry-level job skills.

**Priority "D" – Possibly Occupational:** "D" courses are those taken by students in the beginning stages of their occupational programs. The "D" priority can also be used for service (or survey) courses for other occupational programs.

**Priority "E" – Non-occupational.**



## LOS ANGELES COMMUNITY COLLEGE DISTRICT COURSE STANDARDS AND CRITERIA

Subject: Philosophy

Number: 8

Course Title: Deductive Logic

Using the Official Course Outline, please determine whether or not the above listed credit course meets the following standards and criteria required in Title V, Part VI of the California Administrative Code, and which has been designated as appropriate to the Associate Degree. Place a (X) in the appropriate box.

| <u>CRITERIA AND STANDARDS</u><br>Section 55002   | <u>RATING CRITERION</u> |         |
|--|-------------------------|---------|
|  | MET                     | NOT MET |
| Is recommended by the responsible college officials, and the academic senate or other appropriate faculty body as meeting the requirements of this subsection and has been approved by the local district governing board as a course meeting the needs of the students for admission.   | x                       |         |
| Is taught by a credentialed instructor in the discipline.  | x                       |         |
| Is offered as described <u>in an outline in official college files</u> . That the outline shall specify the unit value, scope, objectives, content in terms of a specific body of knowledge, appropriate reading and writing assignments, outside of class assignments, instructional methodology and methods of evaluation for determining whether the stated objectives have been met by students.   | x                       |         |
| Is taught in accordance with a set of instructional objectives common to all students.   | x                       |         |
| Provides for measurement of students performance in terms of the stated course objectives and culminates in a formal recorded grade based upon uniform standards in accordance with Section 55578 of Title 5, which is permanently recorded as an evaluation of student performance; bases grades on demonstrated proficiency in subject matter determined by multiple measurement for evaluation; and has examinations, including essays and/or, where appropriate, uses appropriate symbol systems and/or skills demonstrations by students. | x                       |         |
| Grants units of credit based upon a specified relationship between the number of lecture and/or laboratory hours or performance criteria specified in the course outline; and requires a minimum of three hours of work per week including class time for each unit of credit, prorated for short-term, lab and activity courses.  | x                       |         |
| Treats subject matter with a scope and intensity which requires students to study independently outside of class time.   | x                       |         |
| Requires, when appropriate, entrance skills and consequent prerequisites for the course before students are enrolled   | x                       |         |
| Requires the ability to think critically and to understand and apply concepts in order to participate in the course.   | x                       |         |
| Requires learning skills and a vocabulary appropriate for a college course.  | x                       |         |
| Requires the use of college level educational materials.   | x                       |         |

## CERTIFICATION AND RECOMMENDATION

This course meets Title 5 requirements for Associate Degree applicable college credit towards an Associate of Arts Degree.

This course meets Title 5 requirements but does not satisfy the requirements for an Associate Degree applicable course.

We certify that the information and answers above properly represent this course.

**Michael Cavanaugh**

Originator

**04/06/06**

Date

**Patricia Lewis**

Department/Cluster Chairperson

**03/21/06**

Date

**Linda Larson Singer**

Articulation Officer

**03/21/06**

Date

**Vincent Jackson – Interim Department Chair**

Librarian

**03/27/06**

Date

**Earnestine Thomas-Robertson**

Dean (if applicable)

**03/21/06**

Date

**Linda Larson-Singer**

Curriculum Committee Chairperson

**03/21/06**

Date

**Reggie Morris**

Academic Senate President

**03/21/06**

Date

**Leige Henderson**

Vice President, Academic Affairs

**04/06/06**

Date

**Mary Gallagher for Audre Levy**

College President

**04/20/06**

Date