This is a Web-Assisted Course: **Description:** Classroom based course with some use of internet resources required.

**MY TCC WEB-PAGE:** [http://faculty.tcc.fl.edu/scma/jonesd/](http://faculty.tcc.fl.edu/scma/jonesd/)
Or you can get to my web page by clicking on the TCC web page ([http://www.tcc.fl.edu](http://www.tcc.fl.edu)), then click on Faculty / Staff, then Faculty Homepages (under Who to Contact), and go from there... the rest is easy!


**PREREQUISITES:** Successful completion of the general education communications requirement and MAT 1033, Intermediate Algebra.

**COURSE DESCRIPTION:**

**PHI 2100 Introductory Logic: Reasoning and Critical Thinking (3) FA SP**

Prerequisite: Successful completion of the general education communications requirement and MAT 1033, Intermediate Algebra. This course consists of an introduction to Aristotelian logic, which is the deductive form of reasoning whose origin is attributed to Aristotle. Additionally, topics in symbolic logic, fallacies and inductive reasoning are developed. The topics covered include basic concepts; inductive and deductive arguments; informal fallacies; categorical propositions; categorical syllogisms; propositional logic, natural deduction and the "rules of inference" and the "rules of replacement"; conditional and indirect proofs; proving logical truths. To satisfy the requirements of the State Board of Education Rule 6A-10:30, each student enrolled in PHI 2100 must complete the course with a grade average of "C" or better and produce competent written work of at least 3,500 words. Lecture 3 hours. Written Work (3,500 words minimum) is required. Satisfies the general education requirement.

**COURSE OBJECTIVES:**

This is a three-semester-hour academic credit course that consists of a traditional introduction to Aristotelian logic and allied topics. This course is specifically focused on Western (essentially European), binary logic. The course objective is to provide the student with a logical framework in which to understand and evaluate today's scientific, technical, and political developments. In words attributed to Thomas
Jefferson:

In a republican nation, whose citizens are to be led by reason and persuasion and not by force, the art of reasoning becomes of first importance.

COURSE OUTLINE (TOPICS COVERED):

Arguments, premises and conclusions; recognizing arguments; deduction and induction; validity, truth, soundness, strength and cogency; argument forms and proving invalidity; and extended arguments.

Fallacies in general; informal fallacies of relevance, weak induction, presumption, ambiguity, and grammatical analogy.

Categorical propositions, including: the components of categorical propositions; quality, quantity and distribution; Venn diagrams and the modern square of opposition; conversion, obversion and contraposition; the traditional square of opposition; transcribing ordinary language statements into categorical form.

Categorical syllogisms, including: standard form, mood and figure; Venn diagrams; rules and fallacies; reducing the number of terms; ordinary language arguments; and sorites.

Introduction to propositional logic, including: symbols and transcription; truth functions; truth tables for propositions; truth tables for arguments; indirect truth tables; argument forms and fallacies.

Introduction to natural deduction in propositional logic, including the rules of implication; the rules of replacement; conditional proof; and indirect proof.

CHAPTERS COVERED:

Ch 1: Basic Concepts  
Ch 3: Informal Fallacies  
Ch 4: Categorical Propositions  
Ch 5: Categorical Syllogisms  
Ch 6: Propositional Logic  
Ch 7: Natural Deduction in Propositional Logic

TEACHING AIDS: There is a computerized tutorial. It is on a CD, and you may have a copy of the CD in the back of your textbook! If you do not, let me know.

REFERENCES AND/OR SOURCE MATERIALS: There is a website: http://philosophy.wadsworth.com/ which leads to many interesting places, including a web page for our textbook.

CALIBRATED PEER REVIEW:1

Abstract

Calibrated Peer Review™ (CPR) is an Internet-based instructional tool that enables students to learn by writing about important topics in a course. Instructors may either author their own CPR assignments or choose from an assignment library. Once assignments are authored or chosen from the library, CPR empowers an instructor to give frequent writing assignments without increasing grading workload. In a CPR assignment, students write short essays on a specific topic. Guiding questions encourage critical thinking and help students organize thoughts for the essay. After electronic submission of essays, students read and assign a score to three “calibration” essays. When students demonstrate they are competent reviewers, they read and assign a score to three anonymous peer essays, and finally, to their own essay. Regular use of CPR assignments teaches students to articulate ideas coherently and to critically evaluate both their peers’ and their own work.

We shall utilize the CPR program to accomplish at least a part of the 3,500 written-word requirement.

HOMEWORK: Homework will be assigned for subsequent classroom discussion. Weekly homework may

1 Quoted from “Calibrated Peer Review™ A Writing and Critical Thinking Instructional Tool The White Paper: A Description of CPR,” by Orville L. Chapman, Professor of Chemistry and Biochemistry at UCLA, and a designer of CPR. http://cpr.molsci.ucla.edu/
be collected and graded. It is OK, it is even encouraged, to form study groups and do homework together.

**QUizzes:** Periodic quizzes will be given. Quizzes will normally be unannounced but open-book. Quizzes will not be group activities. There also will be many Internet quizzes.

**Tests:** There will be four one-hour tests. Tests will be closed-book, no-notes-allowed events. All work will be your own. No test scores will be dropped.

**Final Exam:** There will be a comprehensive final exam given at

Monday, December 12, 2005 ~ ~ 7:30 am until 9:30 am

in our normal classroom (Room SM 129). There is no early final exam, and there is no late final exam. The exam will be a closed-book, no-notes-allowed activity.

**Grading:** A: 90-100; B: 80-89; C: 70-79; D: 60-69; F: below 60

Your grade will be determined by the following formula:

\[ G = 0.60T + 0.15WHQ + 0.25E \]

where

- \( T \) = Unit Test avg.;
- \( WHQ \) = Writing, Homework & Quiz avg.;
- \( E \) = Final Exam grade.

**Factors to be considered in evaluating and grading students:**

**Homework:** I shall probably give about 5 turn-in homework assignments.

**Essays (CPR):** I shall probably give 2 or 3 essay assignments to be accomplished using CPR.

**Quizzes:** I usually give 10 to 15 quizzes.

**Tests:** Four in-class hour tests.

**Final Exam:** The PHI 2100 final exam is a cumulative exam. It is not departmental. The final exam will be given at the date and time assigned in the Fall 2005 Final Exam Schedule. All students enrolled in the course are required to take the final exam and must show a picture I.D. to be admitted into the final exam. Any student missing the final exam will be assigned an F for the course.

**Grading:** See above.

**Academic Alert to Students:** House Bill 1545, passed by the 1997 Florida Legislature, requires that students enrolled in the same college credit course more than two times shall pay non-resident fees for the third time attempted of the course. Florida Colleges and universities were required to start counting attempts beginning Fall 1997. An enrollment is considered a valid attempt if the course remains on your schedule past the published College refund date. On the third attempt not only do you pay non-resident fees, but you may not withdraw from the course. Fourth attempts are allowed only through an academic appeals process based on major extenuating circumstances.

**Attendance:** Roll will be taken. I believe that consistent attendance is necessary in order to learn the subject material. Reasons for absences should be provided.

Additionally, promptness is a habit that should be developed and practiced. Late arrival or early departure not only disrupt the class, but also are extremely impolite. If you must arrive late or leave early, please advise me in advance and sit near the door!

**Withdrawals:** The last day for withdrawal is Tuesday, November 8, 2005. If you find it necessary to withdraw from the course, you must withdraw yourself. Only in the most unusual circumstances will I withdraw you. If you simply stop coming to class, you will most likely receive an F.

**Make-up work:** All work is due at a specified time, and late work will generally not be accepted. Any
deviation from this policy will be made only after a review of circumstances and with material
documentation for my files.

In any event, if you must miss any class, it is a common courtesy to notify the instructor. If you
must miss a test, it is required that you notify your instructor before the event, if possible, or as soon as
possible after the fact. My office phone number is 850-201-8120, and the departmental phone number is
850-201-8499. The departmental FAX number is 850-201-8119. Also, my e-mail address is
jonesd@tcc.fl.edu

HELP: I am available to help you during my posted office hours, or by appointment. I will help you in
person, over the phone, over the internet, or by e-mail. I want to see you succeed, and I will do everything
that I can to help you succeed in logic.

INTERNET: In order to enhance your likelihood of success in this course, I maintain a web page
at http://faculty.tcc.fl.edu/scma/jonesd/. Each day’s activities are listed, important information is posted,
and assignments are posted. Students should check the web page at least once a day.

LOGIC CLAST SKILLS REVIEWED OR TAUGHT IN PHI 2100: The following list of CLAST skills are
reviewed or taught in PHI 2100. This list includes all the CLAST skills on logic.

# IE1 B Deduces facts of set-inclusion or non-set-inclusion from a diagram.
# IIE1 B Identifies simple and compound statements and their negations.
# IIE2 B Determines equivalence or nonequivalence of statements.
# IIE3 B Draws logical conclusions from data.
# IIE4 B Recognizes that an argument may not be valid even though its conclusion is true.
# IIEE1 B Infers valid reasoning patterns and expresses them with variables.
# IIE2 B Selects applicable rules for transforming statements without affecting their meaning.
# IVE1 B Draws logical conclusions when facts warrant them.

PERFORMANCE OBJECTIVES: Course performance objectives are included in the prototype syllabus for
information and use by the instructor. Usually, the complete list of objectives is not distributed to the
students. The usual format is to say that any student who wishes to have a copy may obtain it from the
Division Dean=s office. However, I am including a copy of the course performance objectives, so that you,
the student, is aware of just what you are expected to learn in this course.

On completion of this course the student should be able to . . .

(Chapter 1) recognize the following basic concepts: arguments, premises, conclusions,
deduction, induction, validity, truth, soundness, strength, cogency, invalidity, and extended
arguments.
(Chapter 3) identify the informal fallacies of relevance, weak induction, presumption, ambiguity,
and grammatical analogy.
(Chapter 4) understand and use categorical propositions, including the concepts: quality,
quantity, distribution, traditional and modern square of opposition, conversion, obversion,
contraposition, existential fallacy, Venn diagrams, logical relationships, and immediate
inferences.
(Chapter 5) understand and use categorical syllogisms, including the concepts: standard form,
mood, figure, Venn diagrams, rules of the syllogism, formal fallacies, reducing the number of
terms, ordinary language arguments, and sorites.
(Chapter 6) understand and use propositional logic, including the concepts: symbols,
transcription, truth functions, truth tables for propositions and arguments, forms, formal
fallacies, and indirect truth tables.
(Chapter 7) understand and use natural deduction in propositional logic, including: rules of implication, rules of replacement, conditional proof, indirect proof, and proving logical truths.

CLASS PACING AND TEST DATES: Attached.