Bergen Community College
Division of Arts & Humanities
Department of Philosophy & Religion

Course Syllabus

PHR-103 Introduction to Logic

Basic Information about Course and Instructor

Semester and year:
Course and Section Number:
Meeting Times and Locations:

Instructor:
Office Location:
Phone:
Departmental Secretary: [optional]
Office Hours:
Email Address:

Course Description

PHR-103 Introduction to Logic is an introduction to the principles and methods of deductive reasoning. Topics include the relationship between logic and language; concepts of deductive validity, invalidity, soundness, and consistency; methods for determining the validity and invalidity of deductive arguments; guidelines for determining whether or not a valid argument is sound; and the application of deductive reasoning to issues in philosophy and other disciplines.
3 lectures, 3 credits
General Education Course – Humanities Elective

Student Learning Objectives: As a result of meeting the requirements in this course, students will be able to

1. identify and summarize the basic problems, principles, and methods of deductive reasoning;
2. employ the methods of deductive logic to detect and avoid fallacious reasoning;
3. formulate and evaluate deductive arguments;
4. apply the principles and methods of logical reasoning to the analysis of texts, to the conduct of scientific inquiry, and to the problems of everyday life;
5. use clear, logical, and concise language, both in speaking and writing; and
6. participate actively in discussion of arguments and of the principles of good reasoning.

In pursuit of the above objectives, the course is based on a standard introductory text on deductive and inductive logic; techniques of scholarly research and writing are reviewed; students are given the opportunity and are encouraged to participate actively in class discussions, and students are required to do a substantial amount of expository and critical writing in response to the material presented in the course.

Learning Assessment

The Student Learning Objectives (SLOs) in this course are intended to be aligned with as many of the college's General Education Goals as possible. They are also correlated with the overall Learning Goals of the Philosophy Program. In addition, student progress in reaching the course's SLOs is to be assessed through various means of assessment, such as the "Suggested Means of Assessment" listed below.

Student Learning Objective	Suggested Means of Assessment
1. identify and summarize the basic problems, principles, and methods of deductive reasoning;	• Essay examinations • Quizzes and objective tests • Writing assignments
2. employ the methods of deductive logic to detect and avoid fallacious reasoning;	• Essay examinations • Quizzes and objective tests • Writing assignments • Graded class presentations
3. formulate and evaluate deductive arguments;	• Essay examinations • Quizzes and objective tests • Writing assignments • Graded class presentations
4. apply the principles and methods of logical reasoning to the analysis of texts, to the conduct of scientific inquiry, and to the problems of everyday life;	• Essay examinations • Quizzes and objective tests • Writing assignments • Graded class presentations
5. state and support in clear, logical, and concise writing your own views on issues addressed in the course; and	• Essay Examinations • Writing assignments
6. participate actively in discussions of arguments and of the principles of good reasoning (re: SLOs 1-4).	• Graded class discussions

Special Features of the Course (if any) [to be designated by the instructor]

E.g., the use of learning technologies in the course (Internet, PowerPoint, etc.); the inclusion of technological literacy and/or information literacy learning in the course; etc.

Writing and Critical Thinking Requirement(s)

Because PHR-103 is a General Education course, it requires students to complete a variety of critical thinking and writing assignments. These assignments may include class discussions and debates requiring the application of critical thinking skills, short in-class essays, out-of-class writing projects (journals, research papers, argument-analysis papers, book reviews, etc.), tests and examinations containing essay components, and so forth. Instructors will respond to and comment on students' writing in detail. (See also statement on grading policy, below.)

Information Literacy

Information literacy is generally defined as "...the ability to know when there is a need for information…[and] to be able to identify, locate, evaluate, and effectively use that information for the issue or problem at hand." Instructors in PHR-103 are encouraged to design and incorporate assignments and exercises that enhance students' comprehension of the skills necessary to be informationally literate, considering as possibilities research and writing projects, including term papers, in which a student identifies an information need, accesses and evaluates appropriate resources, and uses the information effectively and ethically for a specific purpose.

Course Content

PHR-103 is an introduction to deductive logic. Therefore, the principles and methods of deductive logic are the primary focus of the course. Discussion of informal fallacies and other issues in inductive and informal logic will not be covered in PHR-103. They make up much of the subject matter of PHR-100 Reasoning. All instructors must present a thorough introduction to propositional logic. This should include the presentation of a complete proof system such as truth trees, one of the many systems of natural deduction, or a hybrid system. Having presented propositional logic, instructors can cover other topics relevant to a course in deductive logic: categorical logic; introductory predicate logic; introductory modal logic, and so forth. PHR-103 Introduction to Logic is taught by the Department of Philosophy and Religion; therefore, instructors are encouraged to present and examine important examples of deductive reasoning in the philosophical literature, when possible and appropriate.

Grading Policy

Students' final grades for this course will be based primarily upon their performance on the required work for the course (examinations, quizzes, homework, writing assignments, journals, class presentations, etc.). Students' grades will not be based exclusively on "objective" or "short answer" quizzes or examinations. Major examinations must include some essay questions which require students to demonstrate understanding of certain techniques and concepts. Students' class participation may also be evaluated and the grade used as one factor in determining final averages; however, class participation may count for no more than twenty percent (20%) of a student's final course grade.

Attendance Policy

BCC Attendance Policy:

All students are expected to attend punctually every scheduled meeting of each course in which they are registered. Attendance and lateness policies and sanctions are to be determined by the instructor for each section of each course. These will be established in writing on the individual course outline. Attendance will be kept by the instructor for administrative and counseling purposes.

Philosophy and Religion Departmental Attendance Policy:

Students are expected to attend class regularly and punctually. Attendance will be taken at each class session. It is expected that class will be conducted such that students will benefit in their written work by the lectures and class discussion. If students occasionally arrive late, they should be encouraged to enter quietly, not disturbing the class. If students miss class, they should be encouraged to use the course calendar to stay abreast of material. It is probably a good idea for students to find study partners and to exchange telephone numbers. Make-ups for examinations should be allowed by the instructor if, in the instructor's judgment, the student has presented a good excuse for missing the work. Instructors may penalize work which is late; however, the instructor's policies for make-ups and late work must be clearly specified on the student guide.

Attendance Policy in this Course:

[To be designated by the instructor]

Course Texts and/or Other Study Materials

Recommended Texts – the most recent editions of the following:

Stephen F. Barker, *The Elements of Logic* (McGraw-Hill).
Irving Copi, Carl Cohen, and Kenneth McMahon, *Introduction to Logic* (Prentice-Hall).
Harry J. Gensler, *Introduction to Logic* (Routledge).
Patrick Hurley, *A Concise Introduction to Logic* (Cengage). Current departmentally-approved text for this course.
Robert M. Johnson, *Fundamentals of Reasoning – A Logic Book* (Wadsworth).
Howard Kahane and Paul Tidman, *Logic and Philosophy: A Modern Introduction* (Cengage).
David Kelley, *The Art of Reasoning* (Norton).
Brooke N. Moore and Richard Parker, *Critical Thinking* (McGraw-Hill).
John Nolt, *Logics* (Cengage).
Howard Pospesel, *Propositional Logic* and *Predicate Logic* (Prentice-Hall).
Merilee H. Salmon, *Introduction to Logic and Critical Thinking* (Cengage).

Other College, Divisional, and/or Departmental Policy Statements [optional but recommended]

Examples:
Statement on plagiarism and/or academic dishonesty.
ADA statement.
Sexual Harassment statement.
Statement on acceptable use of BCC technology.
Statement on the purpose and value of faculty office hours.

Student and Faculty Support Services [optional but recommended]

List support services, e.g., the Writing Center, the Math Lab, the Tutorial Center, Online Writing Lab (OWL), Office of Specialized Services, etc. Include information on the BCC Library.

Example:

Student and Faculty Support Services

The Distance Learning Office – for any problems you may have accessing your online courses	Room C-334	201-612-5581 psimms@bergen.edu
Smarthinking Tutorial Service	On Line at:	http://www.bergen.edu/pages1/Pages/4787.aspx
The Tutoring Center	Room L-125	201-447-7908 http://www.bergen.edu/pages1/pages/2192.aspx
The Writing Center	Room L-125	201-447-7908 http://www.bergen.edu/pages1/Pages/1795.aspx
The Office of Specialized Services (for Students with Disabilities)	Room S-131	201-612-5270 http://www.bergen.edu/oss
BCC Library – Reference Desk	Room L-226	201-447-7436

Special Note on the Tutoring Center

The Henry and Edith Cerullo Learning Assistance Center encompasses the Tutoring Center, the English Language Resource Center, and the Writing Center. The website of the Learning Assistance Center is located at www.bergen.edu/pages/2192.asp. Tutoring services are available for this course in the Tutoring Center. I strongly recommend that you make use of those services as we progress through the course. As listed above, the Tutoring Center is located in Room L-125, and its phone number is 201-447-7908.

Include the following statement on Logos – The BCC Philosophy and Religion Club

Logos – The BCC Philosophy and Religion Club

Logos usually meets on Tuesdays during the Activities Period, 12:30-1:25 PM, but sometimes also on different days and at different times. I encourage you to join the club. Since you are interested in the study of philosophy, you should find the meetings and other activities of the Philosophy & Religion club very interesting. For further information, check the Philosophy & Religion bulletin board adjacent to Room L-325A or contact LOGOS Advisor, Professor Jennifer Lyden (L-326, 201-493-3540, jlyden@bergen.edu). (LOGOS does not hold regular meetings during the summer.)

Include a Course Outline and Calendar [can be combined in a single syllabus section]

The Course Outline and Calendar must include all of the following elements:

- A daily or (at least) weekly schedule of topics to be covered.
- Dates for exams, quizzes, or other means of assessment. (This does not mean that all evaluation of students must be in groups and at the same time. Exams and other means of assessment can be listed as "to be scheduled individually.")
- Due dates for major assignments – e.g., when is a paper due; if the topic has to be approved, when; if an outline or draft is an interim step, when it is due.
- Any required special events must be included in the outline/calendar, e.g., a lecture by a visiting speaker, a dramatic or musical performance, a field trip.
- Designation of Student Learning Objectives – by number – for each topic (see sample below).
- A note to students stating that the course outline and calendar is tentative and subject to change, depending upon the progress of the class.

Sample Format for Combined Course Outline and Calendar

Note to Students: The following Course Outline and Calendar is tentative and subject to change, depending upon the progress of the class.

Week(s)	Date(s)	Topics & Assignments	Learning Objectives
1			
2			
3			
4			
5			
6			
7			
8			
9			

10			
11			
12			
13			
14			
15			

See the Sample Course Outline and Calendar below.

SAMPLE COURSE OUTLINE AND CALENDAR
[with designation of Student Learning Objectives – by number – for each topic]

Note to Students: The following Course Outline and Calendar is tentative and subject to change, depending upon the progress of the class.

Part I. Logic — The Process of Correct Reasoning

Week(s)	Date(s)	Topic/Activity/Assignments	Student Learning Objectives
1	Sep 5	Introduction to the Course	
2	Sep 12	The Process of Argument Analysis and Evaluation Course Text,* 1-11; Exercises 1.1-1.7	1-6
3	Sep 19	Deductive and Nondeductive Logic Course Text, 11-19; Exercise 1.8 First Paper Assigned (due 10/10)	1, 3, 5-6 1-5
4	Sep 26	Necessary and Contingent Statements Course Text, 20-25; Exercise 1.9 Review of the Process of Argument Analysis and Evaluation Course Text, 25-29; Exercise 1.10	1, 4, 5, 6 1-3, 5-6
5	Oct 3	Exam 1 (Chapter 1) Notebook Check	1-5

Part II. Introduction to Propositional Logic

Week(s)	Date(s)	Topic/Activity/Assignments	Student Learning Objectives
6	Oct 10	Statements and Statement Forms Course Text, 31-39; Exercises 2.1-2.5 First Paper Due Return and Review of Exam 1	1, 5-6 1-5, 6
7	Oct 17	The Logical Operators and Basic Rules of Propositional Logic Course Text, 39-45; Exercise 2.6 Return and Review of First Paper Second Paper Assigned (due 11/14)	1, 5-6 1-5, 6 1-5
8	Oct 24	Argument Forms and Truth Tables Course Text, 45-55; Exercises 2.7-2.10	1-3, 5-6
9	Oct 31	Truth Trees Course Text, 55-61; Exercises 2.11-2.14	1-3, 5-6
10	Nov 7	Exam 2 (Chapter 2) Notebook Check	1-5

*All page references are to Cronk, George. ***Fundamentals of Modern Logic.*** Plymouth, MI: Hayden-McNeill Publishing, 2001. ISBN 0-7380-0383-2.

Part III. More Advanced Features of Propositional Logic

Week(s)	Date(s)	Topic/Activity/Assignments	Student Learning Objectives
11	Nov 14	Truth functions Course Text, 63 Tautologies, Contradictions, and Contingent Statements Course Text, 63-67; Exercises 3.1-3.2 Logical and Material Conditionals and Biconditionals Course Text, 67-69; Exercise 3.3 Second Paper Due Return and Review of Exam 2	1, 5-6 1, 5-6 1, 5-6 1-5
12	Nov 21	Arguments as Conditional Statements Course Text, 70-72; Exercise 3.4 Necessary and Sufficient Conditions Course Text, 72-73 Eccentrically Valid Arguments Course Text, 74-75 Return and Review of Second Paper	1-4, 5-6 1, 4, 5-6 1, 3, 5-6 1-5, 6
13	Dec 5	Consistency and Validity Course Text, 75-81; Exercises 3.5-3.8 Final Deadline for Late Papers and Extra Credit Work	1-4, 5-6
14	Dec 12	Further Uses of Truth Trees Course Text, 82-85; Exercises 3.9-3.12	1-3, 5-6
15	Dec 19	Exam 3 (Ch. 3) Notebook Check	1-5