

Critical Thinking

Spring 2012

Phly 174 P100 (2919)

Tuesdays and Thursdays

2:30–3:45 PM

SC 110

# Professor: Rob Loftis

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Email is the best way to contact me. I promise to respond to all emails within 48 hrs, and generally respond within 24.

“It is wrong always, everywhere, and for anyone to believe anything upon insufficient evidence” –W.K. Clifford “The Ethics of Belief” 1877

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# Course Information

## Important Announcements

* Please turn off all cell phones and pagers during class.
* If you have a disability and need special accommodation, please see me early in the semester.
* Read this syllabus carefully!
* Important announcements for this course will be sent by email. Please check your email regularly.
* Tutoring is available through the Academic Support Center. 1-800-955-9222 (ext. 4057) or (440) 366-4057. See www.lorainccc.edu/tutoring+and+testing+center/

## Course Texts

* Woods, Cathal. 2012. *Introduction to Reasoning*. Photocopy available at bookstore or download the .pdf from Angel.
* Woods, Cathal. 2012. *Introduction to Reasoning: Exercise Book*. Photocopy available at bookstore or download the .pdf from Angel.

## Course Description

This course will teach you the general purpose critical thinking skills you can apply in almost any situation. The focus of this course will be on interpreting and evaluating *arguments,* chains of reasoning designed to convince others, or sometimes ourselves, that something is true. In all of our investigations, our focus will not be on the particular subject being discussed, but the way people discuss it. This is a skills course. The goal is not to impart a body of facts, but to train you to use certain techniques naturally and effortlessly. Because this is a skills course, we will do a lot of drilling. Exercises will be repeated until they are second nature. Most of the time, the skills we will be drilling will be very basic. In you play on a basketball team, you spend a lot of time drilling lay ups, passes, and free throws. Similarly, in reasoning we will spend a lot of time identifying premises and conclusions and reconstructing chains of reasoning. In basketball, all of the basic skills you drill come together to create something quite complex that many people think is very beautiful. Same for reasoning. By the end of the course we will be putting all the little simple things together to create complicated beautiful things. The most important advice I can offer is that you work hard on the simple things, so that you don’t get completely lost when they all come together in a complicated thing.

Course Expectations*,*

This course meets twice a week for 75 minutes a session, or 150 minutes a week. As with most college courses, it is assumed you will do two hours of homework for every fifty minutes of class time, so you should allow for about six and a half hours of homework a week. For most of this class, that will mean six hours a week *practicing critical thinking skills.* This is very much a skills-based course, and the only way to acquire these skills is to practice, practice, practice. Your individual time spent on homework will vary depending upon how naturally you take to the material in this course.

## Catalogue Course Description & Prerequisites

Introduction to logical concepts and skills needed for practical reasoning and decision-making and the evaluation of appeals and arguments encountered in everyday life. Emphasis on informal fallacies, rhetorical appeals, inductive reasoning, and moral reasoning. *Humanities Core Course*

## Course Outcomes

This course will give you…

* Demonstrate critical standards of assessment and judgment.
* Use principles for the analysis and evaluation of inductive, deductive, scientific and moral arguments.
* Recognize and respond to rhetorical appeals encountered in everyday life.
* Recognize and respond to informal fallacies of various types.

# Assignments

## Grading

|  |  |
| --- | --- |
| 5% Attendance  5% Classroom Participation  15% Homework Exercises | 25% Field projects  50% Short Tests |

Individual assignments are graded on a 100 point scale. Your total grade for the semester is also computed on a 100 point scale. Only when I turn in final grades is anything converted to LCCC’s letter system. The final conversion is done using the standard scale 0–59: F, 60–69: D, 70–79: C, 80–89: B, 90–100 A.

I keep my gradebook on Angel, so you can access your grades anytime. A summary of your grades can be seen in the “syllabus/resource” tab of Angel. Clicking on that summary will take you to the reports page, where you can get more detailed information, including your attendance.

## Attendance

There will be a sign in sheet every day. Attendance is graded by dividing the number of classes you signed in for by the total number of classes, to get a grade on a hundred point scale. Thus in a term with 30 classes, each unexcused absence costs you 3⅓ points on your attendance grade. It is your responsibility to sign the attendance sheet each class.

The best way to be sure that an absence is excused is to email me before the class to let me know you will absent. Absences can be excused if you are sick, a child or other dependent is sick, a family member or loved one passes away or is close to passing away, you or a loved one gives gets married or gives birth to a child, or you have *unexpected* transportation problems. If you know you will be absent far in advance, please let me know far in advance. I do not require documentation for an absence if you contact me in advance and have three absences or fewer.

Attendance records are kept on Angel. You can see how you are doing by going to “Reports” then selecting “Learner Profile” in the drop down field under “Category” and “Attendance” in the drop down field under “Report” and then clicking “Run.”

## Classroom Participation

*Critical thinking is not a spectator sport*. Going to a critical thinking class is like going to a gym. The instructor is there to show you what exercises to do and how to do them, but in the end, you are the one who has to do the push-ups and the sit-ups. Often during class I will call on students to present homework exercises on the board. During other classes I might ask someone to work through a problem you have never seen before or engage in some group exercise. Sometimes there will just be free discussion of philosophical topics. I will keep track of how much people participate in all these activities and use that record to determine your participation grade, which is 5% of your total grade. If you wish to know how you are doing for classroom participation at any point in the course, feel free to ask.

## Homework Exercises

All homework assignments will be taken from the *Exercise Book,* which is available in printed and electronic form.There are three ways you can use the book.

1. Download the three .rtf files that make up the *Exercise Book*. You can then open the pages you need in a word processor, type your answers right in the file, and submit your answers to the online drop box, or print them and bring them to class. This is the method I prefer.
2. Download the book from angel in any format, print the pages you need and write the answers on those pages by hand and bring them to class.
3. Purchase the book at the bookstore, write your answers directly in it, tear out the relevant pages and turn them in to me. The way Woods has the book laid out, there is a lot of white space after each exercise for you to complete the work in.

I am assigning 14 problem sets. Each problem set is worth 7 points, with 2 freebie points for a total of 100 points. Your total problem set grade will be 15% of your course grade. You do not have to get the homework problems right to get credit for the assignment, you only have to show that you made an honest effort to solve the problems. Homework may be handwritten, but I always prefer typing.

A note on page numbering: The textbook we are using is designed with four modules, which can be used in any order. I had the bookstore print up three modules for this class: “Preface and Introductory Chapter” “Real World Reasoning” and “Inductive and Scientific Reasoning.” Each module has separate page numbers with different prefixes, which gets a little confusing. To help you out, I’ve listed the prefixes below.

|  |  |  |
| --- | --- | --- |
| Module | Textbook page numbers | Workbook page numbers |
| Preface and Introductory Chapter | P&I-1, P&I-2, etc. | P&I Ex-1, P&I Ex-2, etc. |
| Real World Reasoning | RW-1, RW-2, etc. | Ex—1, Ex—2, etc. |
| Inductive and Scientific Reasoning | I&S-1, I&S-2, etc. | I&S Ex-1, I&S Ex-2, etc. |

To make things worse, the *Exercise Book* has the modules printed out of order. The order of modules in the main text and the course as a whole is P&I, RW, then I&S. But the order in the workbook is P&I, I&S then RW.

Below is the list of problem sets.

|  |  |  |
| --- | --- | --- |
| Set # | Assignment | Alternate Late Assignment |
| 1. | * Exercise Set (1) on Some Everyday Reasoning. **(**The pages are marked “P&I Ex-1” to “P&I Ex-3”) | * Exercise Set (2) on Some Everyday Reasoning. **(**The pages are marked “P&I Ex-4” and “P&I Ex-5”) |
| 2. | * Exercise Set (1) on Analysis. (The pages are marked Ex—1 to Ex—4) * Exercise Set (1) on Analysis Steps 1–7 and Things to Omit. (Ex—8 to Ex—10) | * Exercise Set (2) on Analysis. (The pages are marked Ex—5 to Ex—7) * Exercise Set (2) on Analysis steps 1–7 and Things to Omit. (Ex—11 to Ex—13) |
| 3. | * Exercise Set (1) on Two Criteria (Ex–14 to Ex—17) * Exercise Set (1) on Getting Clear on the Meaning (Ex—22 to Ex—24) | * Exercise Set (2) on Two Criteria (Ex—18 to Ex—20) * Exercise Set (2) on Getting Clear on the Meaning (Ex—25 to Ex—27) |
| 4. | * Exercise Set (1) on Sources (Ex—28 to Ex—32) | * Exercise Set (2) on Sources (Ex—33 to Ex—36) |
| 5. | * Exercise Set (1) on Reasoning without Reasons (Ex—37 to Ex—38) * Exercise Set (1) on Overstating the Strength of the Reasoning (Ex—41 to Ex—43) * Exercise Set (1) on Arguing with Emotional Reasons (Ex—47 to Ex—50) | * Exercise Set (2) on Reasoning without Reasons (Ex—39 to Ex—40) * Exercise Set (2) on Overstating the Strength of the Reasoning (Ex—44 to Ex—46) * Exercise Set (2) on Arguing with Emotional Reasons (Ex—51 to Ex—54) |
| 6. | * Exercise Set (1) on Adding Warrants (Ex—55 to Ex—60) * Exercise Set (1) on Adding Warrants in Practical Arguments (Ex—67 to Ex—68) | * Exercise Set (2) on Adding Warrants (Ex—61 to Ex—66) * Exercise Set (2) on Adding Warrants in Practical Arguments (Ex—69 to Ex—70) |
| 7. | * Exercise Set (1) on Diagrams (Ex—71 to Ex—73) * Exercise Set (1) on Complex Reasoning (Ex—77 to Ex—80) | * Exercise Set (2) on Diagrams (Ex—74 to Ex—76) * Exercise Set (2) on Complex Reasoning (Ex—81 to Ex—84) |
| 8. | * Exercise Set (1) on Objections and Rebuttals (Ex—85 to Ex—87) * Exercise Set (1, 2) on Very Long Passages (Ex—91 to Ex—92). | * Exercise Set (2) on Objections and Rebuttals (Ex—88 to Ex—90) * Exercise Set (1, 2) on Very Long Passages (Ex—91 to Ex—92). |
| 9. | * Exercise Set (1) on Valid, Strong, and Weak Inference. (I&S Ex-1 to I&S Ex-3) * Exercise Set (1) on Inductive Generalization (I&S Ex-7 to I&S Ex-9) | * Exercise Set (2) on Valid, Strong, and Weak Inference. (I&S Ex-4 to I&S Ex-6) * Exercise Set (2) on Inductive Generalization (I&S Ex-10 to I&S Ex-14) |
| 10. | * Exercise Set (1) on IG, IS, & IP. (I&S Ex-15 to I&S Ex-18) | * Exercise Set (2) on IG, IS, & IP. (I&S Ex-19 to I&S Ex-22) |
| 11. | * Exercise Set (1) on Cross-tabulations and Correlations Diagrams (I&S Ex-23 to I&S Ex-28) * Exercise Set (1) on Correlation & Causation/Explanation (I&S Ex-35 to I&S Ex-37) | * Exercise Set (2) on Cross-tabulations and Correlations Diagrams (I&S Ex-29 to I&S Ex-34) * Exercise Set (2) on Correlation & Causation/Explanation (I&S Ex-38 to I&S Ex-41) |
| 12. | * Exercise Set (1) on Necessary and Sufficient Conditions (I&S Ex-42 to I&S Ex-43) * Exercise Set (1) on Causal Inferences (I&S Ex-46 to I&S Ex-49) * Exercise Set (1) on INUS Conditions (I&S Ex-54) | * Exercise Set (2) on Necessary and Sufficient Conditions (I&S Ex-44 to I&S Ex-45) * Exercise Set (2) on Causal Inferences (I&S Ex-50 to I&S Ex-53) * Exercise Set (2) on INUS Conditions (I&S Ex-55) |
| 13. | * Exercise Set (1) on Analogy (I&S Ex-57 to I&S Ex-58) * Exercise Set (1) on Experimental Methods (I&S Ex-61 to I&S Ex-64) | * Exercise Set (2) on Analogy (I&S Ex-59 to I&S Ex-60) * Exercise Set (2) on Experimental Methods (I&S Ex-65 to I&S Ex-40) |
| 14. | * Exercise Set (1) on IBE (I&S Ex-71 to I&S Ex-73) | * To be announced. |

Answer sheets will be posted on Angel, but printed copies will not be distributed in class.

Field Project

I am assigning 6 field projects, each of which involves identifying examples of things we have discussed in class in the popular media, such as a magazine, newspaper, or website. The average of these projects is worth 25% of your grade.

Field Project 1: Find an example of an argument or an explanation in a magazine, newspaper, or online. Analyze the argument using steps 1–7 on page RW-12. Bring a copy of the original source to class, or at least give a citation so I can find it myself. Give reasons for all of your judgments.

Field project 2: Find an example of an argument or an explanation in a magazine, newspaper, or online. Analyze the argument using steps 1–7 on page RW-12. Then evaluate the truth of the reasons and the strength of the reasoning. Bring a copy of the original source to class, or at least give a citation so I can find it myself. Give reasons for all of your judgments.

Field project 3: Find an example of an argument or an explanation in a magazine, newspaper, or online where the speaker argues without reason or uses emotional reasons. If you think the speaker is arguing without reasons discuss why. If you think the speaker is arguing with emotional reasons, identify the emotions being used and discuss the truth of the premises and the strength of the reasoning.

Field Project 4: Find an example of an argument or an explanation in a magazine, newspaper, or online. Analyze the argument using steps 1–7 on page RW-12. Add any warrants you think are needed and state whether you believe they are true. Bring a copy of the original source to class, or at least give a citation so I can find it myself. Give reasons for all of your judgments.

Field Project 5: Find an example of an argument or an explanation in a magazine, newspaper, or online. Diagram the argument using the arrow method described in chapter 5. Bring a copy of the original source to class, or at least give a citation so I can find it myself. Give reasons for all of your judgments.

Field Project 6: Find an example of an argument or an explanation in a magazine, newspaper, or online. Diagram the argument using the arrow method described in chapter 5. Bring a copy of the original source to class, or at least give a citation so I can find it myself. Give reasons for all of your judgments.

## Short tests

Halfof your grade will come from 8 short tests, generally on Thursdays. The tests will only cover the material from the week before; however sometimes understanding that material will require understanding earlier material, so there is an important sense in which the tests are cumulative. If you do poorly on a test, fear not! In place of a final exam, you will have theopportunityto make up any two tests. The make-ups are included because your grade for the course should reflect your comprehension at the end of the course. During the final exam period, you will also have the chance to make up any tests you missed because of an excused absence, in addition to the two make-ups you already have.

# Schedule

## Notes

Assignments are due on the day they are listed across from. Major assignments are in **boldface**. All readings not from Woods will be on Angel.

The schedule for in-class activities is more tentative than the homework schedule. In class activities can change without notice. Homework assignments will only change if there is a major problem, in which case you will receive a new schedule.

## Calendar

|  | **Date** | **Assignment Due** | **In Class activities** |
| --- | --- | --- | --- |
|  | Tues., Jan. 10. |  | Introduction |
|  | Thurs., Jan. 12. | Read Preface and Introductory Chapter. Do problem set 1. |  |
|  | Tues., Jan. 17. | Read RW Chapter 1. Do Problem Set 2. |  |
|  | Thurs., Jan. 19 | **FP1** |  |
|  | Tues. Jan 24 |  | **Test 1** |
|  | Thurs., Jan. 26 | Read RW Sections 2.1–2.2. Do problem set 3 |  |
|  | Tues., Jan 31 | Read RW Sections 2.3–2.5. Do problem set 4. |  |
|  | Thurs., Feb. 2 | **FP2** |  |
|  | Thurs., Feb. 7 |  | **Test 2** |
|  | Thurs., Feb. 9 | Read RW Chapter 3. Do problem set 5. |  |
|  | Thurs., Feb. 14 | **FP 3** |  |
|  | Thurs., Feb. 16 |  | **Test 3** |
|  | Tues., Feb. 21 | Read RW Chapter 4. Do problem set 6 |  |
|  | Thurs., Feb. 23 | **FP 4** |  |
|  | Tues., Feb. 28 |  | **Test 4** |
|  | Thurs., Mar. 1 | Read RW Sections 5.1–5.4 Do problem set 7. |  |

*Sunday March 4 – Saturday March 10: Spring break*

|  |  |  |  |
| --- | --- | --- | --- |
|  | Tues., Mar. 13 | **FP 5** |  |
|  | Thurs., Mar. 15 | Read RW Sections 5.5–5.8. Do problem set 8. |  |
|  | Tues., Mar. 20 | **FP 6** |  |
|  | Thurs., Mar. 22 |  | **Test 5** |
|  | Tues., Mar. 27 | Read I&S Sections 1.1–1.2. Do problem set 9. |  |
|  | Thurs., Mar. 29 | Read I&S Sections 1.3–1.6. Do problem set 10. |  |
|  | Tues., April 3 |  | **Test 6** |
|  | Thurs., April 5 | I&S Sections 2.1–2.4. Do problem set 11. |  |

*Friday, April 6: Last day to withdraw from class without documented extenuating circumstances.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Tues., April 10 | I&S Sections 2.5–2.8. Do problem set 12. |  | |
|  | Thurs., April 12 |  | **Test 7** | |
|  | Tues., April 17 | I&S Sections 3.1­–3.3. Do problem set 13. |  | |
|  | Thurs., April 19 | I&S Sections 3.4­–3.6. Do problem set 14. |  |
|  | Tues., April 14 |  | **Test 8** |
|  | Thurs., April 26 |  | Review day. |
| *Thursday, May 3, 2:00–3:50 PM: Final exam: Retake any three tests.* | | | |

# Policies

## Making-Up and Retaking Quizzes

There will not be a final exam for this course. Instead you will have an opportunity to re-take any three quizzes at the end of the term. The justification for this is that it shouldn’t matter when you master the material, as long as you master it by the end of the term. If you know the material by the end of the course, you shouldn’t be penalized for not getting it at the beginning. This is particularly true in logic, where different people adapt to the material at different speeds. On the other hand, if you’ve mastered the material early in the course, you shouldn’t need to prove again that you’ve mastered it at the end.

The quizzes you retake will cover the same material, but will not have exactly the same questions. Most people will probably want to re-take 3 their three lowest quizzes. However in some cases you might actually be able to raise your grade more by re-taking a quiz that you did ok on, but now know the material really well. So if you got a 75 on quiz six and a 55 on quiz ten, but you think you can raise your quiz six grade to a 100 and aren’t even sure you’ll do better at all the next time you take quiz 10, you should re-take quiz six. If you are completely satisfied with your grade before the final exam, you do not have to retake the quizzes at all.

The quizzes you retake at the end of the term are separate from quizzes that you make up because you have an *excused* absence. If you have an excused absence, you can make up the quiz immediately at the Testing and Assessment Center, in College Center 233. I will send a test over with your name on it, and you can take the test any time the test center is open, as long as you present an ID. If you miss a quiz and want it sent over to the Testing and Assessment Center, please contact me as soon as you can. You can also make-up quizzes you missed when you retake your three quizzes at the end of the term, but I do not recommend it.

If you missed a quiz and you do *not* have an excused absence, then the quiz will simply be counted as a zero, and you will have to retake it using one of your three allotted retakes at the end of the term. Every semester, someone decides that being able to retake three quizzes means that they can simply blow off three quizzes during the regular semester and take them at the end. I do not recommend this strategy. If you have to use all three of your retakes to make up quizzes you missed because you slept in, then you will have no retakes left to change the quizzes that you failed because you hadn’t grasped the material yet.

## Respectful Conversation and Instructor Neutrality

Philosophy classes inevitably touch on controversial issues—contemporary political issues, religious issues, issues of personal ethics. We talk about these things because they are important; we talk about them specifically in philosophy classes because philosophy provides some of the best tools for getting at the truth of these issues. People always tell you not to talk about religion or politics in polite company, but it is hard to talk philosophically about the weather, thus we must risk impoliteness.

There are no belief requirements for this class: you are free to express any idea you choose. This may at times create uncomfortable situations. Remind yourself at such times of how to hold a respectful discussion with someone you disagree with: assume you can learn something from everyone you talk to; try to find at least one way you agree with whomever you talk to; criticize the view, not the person; if you expect someone else to change their views, you have to be willing to change your own; and above all else *listen*.

To avoid making anyone feel unwelcome, I will not be stating my own views on any controversial political or ethical issues in the classroom. I have convictions like anyone else, and will be happy to discuss them, but not in this venue. In the case of empirical issues, I will present the best scientific theories available, along with the evidence for those theories. I will take for granted the truth of any scientific consensus, such as the theory of evolution or the idea that disease is caused by germs. I promise that students will be graded on the quality of their work—their knowledge of the subject, the quality of their arguments, and the felicity of their presentation—and not the stances they hold. I also promise that the syllabus has been balanced to include all the major viewpoints in any debate as much as possible in the time available. Do not assume that because I have assigned a book, I endorse a word of its contents. I will, during the course of the class, ask people to justify their beliefs. I do this to get you to strengthen your arguments, not to challenge your right to your opinions.

## My Rights Regarding Your Written Work

For the sake of improving my teaching and the teaching of others, I reserve the right to save copies of your written work to use as examples for other classes or examples in scholarly articles about teaching philosophy. When your work is used as an example of student work, it will be printed anonymously. If your work contributes to the substance of something I write, I will cite your work following the usual academic conventions. I’ll also probably spend time thanking you and saying you are brilliant. If you do not wish me to keep copies of your work, you must give me a written and signed statement to that effect.

## Document Retention Policy

All submitted work is kept for at least one year. The course itself also remains available on Angel for one year. The gradebook is converted to XL and kept by the instructor for a minimum of three years. (Actually, I’ve never had any reason to delete the gradebooks, and currently have gradebooks on my hard drive going back to 1999.)

## LCCC Policy on Students with Special Needs

Under the Americans with Disabilities Act, the college is required to provide “reasonable accommodation” for “qualified handicapped individual.” Handicapped individuals include people who have “physical or mental impairment which substantially limits one or more of such person's major life activities” or individuals who have a record of such impairment or are regarded as having such impairments.

Help for the disabled is available through the Office for Special Needs Services (OSNS) in College Center Room 234. Available help includes accessibility arrangements, note-taking assistance, accommodated testing, readers, adaptive equipment, sign interpreters, referrals, advocacy, and advising. Free tutoring is actually available for all students, regardless of disability, though the Academic Support Center, up to two hours a week. Disabled students may be entitled to more free tutoring, and should contact the OSNS. Further information on the campus disability policy is available online at <http://catalog.lorainccc.edu/Campus+Policies/ADA.htm>

# LCCC Withdrawal Guidelines

Students have the right to withdraw from this course for any reason prior to November 12. After the deadline, students seeking course withdrawal must formally request an Administrative Withdrawal. Your request must 1) be a compelling reason (something major, beyond their control), 2) supported by official documentation, 3) something that occurred after the deadline (or with a compelling reason why the deadline was not met).

Further information on withdrawals can be found at

[https://catalog.lorainccc.edu/Enrollment/Withdrawals.htm](https://mymail.lorainccc.edu/exchweb/bin/redir.asp?URL=https://catalog.lorainccc.edu/Enrollment/Withdrawals.htm)

or by clicking on “2010-11 Annual Catalog” on LCCC Homepage, then “Admissions and Enrollment” in left-hand menu on 2010-11 Annual Catalog page, then clicking “Withdrawals” in left-hand menu on Admissions and Enrollment page.

# Online Resources

Angel: The Angel pages for this course contain the additional readings and an online gradebook. Answer sheets will be posted there at 6:00 PM the day homework is due.

Textbook Homepage: http://facultystaff.vwc.edu/~rwoods/methodsoflogic.htm.