UGRC 150 CRITICAL THINKING & PRACTICAL REASONING

STUDY GUIDE



UGRC 150 CRITICAL THINKING & PRACTICAL REASONING

STUDY GUIDE For Undergraduates (Level 100)

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COURSE DESCRIPTION

1. COURSE WEBSITE

http://sakai.ug.edu.gh/XXXXXXXXXXXX

2. INSTRUCTOR

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4. OVERVIEW

The objective of this course is to introduce students to different ways of thinking properly, as in using the rules of logic to appraise thoughts or language. It also seeks to enhance the understanding and research skill of students in the empirical fields of the sciences and the humanities in general.

In specific sense, students will be introduced to methods and requirements of establishing logical and empirical truths. This is to make critical analysis or reasoning a component of the practical lives of students and a significant means for the solution of problems generated in various academic disciplines.

The following topics, among others, will be treated by the end of the Semester: thoughts as objects of scrutiny, types of definition, contrasting types of discourse, the normative and the empirical, the difference between induction and deduction, further discussion of induction (in the sciences and everyday life), polemical tricks and rhetorical ploys (informal fallacies).

5. PROBLEM-BASED LEARNING APPROACH

Problem-based learning (PBL) is a student-centered pedagogy in which students learn about a subject through the experience of problem solving. The goals of PBL are to help the students develop flexible knowledge, effective problem solving skills, self-directed learning, effective collaboration skills and intrinsic motivation. This course will use a problem-based learning approach — especially in relation to language and logic.

The role of the instructor/lecturer/tutor is to facilitate learning by supporting, guiding, and monitoring the learning process. The tutor will help build students' confidence to take on problems of logical significance, and encourage the students, while also stretching their understanding.

6. COURSE FORMAT

The course content will be delivered online through the SAKAI Learning Management System (Sakai LMS). The Sakai LMS will be used to deliver

- Video Lecture Sessions
- Session Slides
- Session Reading Materials
- Assessments Tests, Assignments, and End-of-Semester Exams.

Announcements will be posted to the course website and/email accordingly. It is the responsibility of students to check on announcements made in class, on the Course Website, and through email.

7. LEARNING OUTCOMES

The learning outcomes for the course are outlined along three strands: knowledge, skills and outcomes.

7.1 KNOWLEDGE

Students must have knowledge on

- 1. How to distinguish different types of argument/knowledge/truth and how best to acquire them. They should know the difference between inductive reasoning (for probable truths) and deductive ones (for necessary truths).
- 2. The value or significance of each type of reasoning.
- 3. Why it is necessary to examine one's own thoughts and how to categorize the sentences that express them.
- 4. The difference between empirical and normative judgements.
- 5. How definitions differ and overlap.
- 6. The different types of discourse i.e. argument, instruction, rhetoric, narrative.
- 7. Informal fallacies.

7.2 SKILLS

Students must be able to

- 1. Identify and critically analyse sentences that claim some truth and point out those that are incapable of being true or false.
- 2. Identify when the principles of logic may or may not be used on a type of language.
- 3. To identify and construct arguments.
- 4. Apply appropriate philosophical techniques to assess the strengths and weaknesses of arguments.
- 5. Avoid the pitfalls in different modes of reasoning so as to reason well.
- 6. Apply appropriate techniques of reasoning in one's everyday life.
- 7. Determining the appropriate way in which the meaning of a word is being sought.

7.3 COMPETENCE

Students should in the future be able to

- 1. Think clearly about conceptual and practical problems and make good suggestions about how to resolve them.
- 2. Express their thoughts in a clear manner, free from ambiguities and logical inconsistencies.
- 3. Engage in critical, independent thinking in all that they do.
- 4. Grasp the essence of what they read or are told, in contrast with what is just diversionary (and thus factually or logically insignificant).
- 5. Organize their thoughts and present them in a mature, logically acceptable way.

8. ASSESSMENT

The assessment for this course has been designed to help all students to maximize their individual and group/team learning opportunities. A summary of the assessment tasks is provided below.

ITEM	FORM OF ASSESSMENT	DELIVERED	MARKS
Interim Assessment	Multiple Choice Questions (MCQs) Short Answers Filling Blank Spaces	Middle of Semester	30%
Final Examination	Semester Examination	End of Semester	70%
	·	<mark>Total</mark>	<mark>100%</mark>

8.1 Interim Assessment

Interim Assessment will be provided in the Middle of the Semester, usually in the sixth or seventh week. This assessment may be in the form of Multiple Choice Questions (MCQs), Short Answers, and Filling Blank Spaces – or a combination of all. Students will be informed about the date and venue for the Assessment.

8.2. Class Assignments

Although non-scoring, the tutor must adequately engage the students by asking them to provide their own answers to questions that relate to things discussed in class. Getting students to think on the spot does not only help in making them critical, but it also makes them confident in their ability to handle, independently, such problems outside the classroom.

9. RECOMMENDED TEXT

Lauer, H. (2013) UGRC 150: Critical Reasoning and Practical Reasoning (Second ed.), Abena Oduro and Benjamin Amponsah ed., Accra.

E-book version of the book may be provided

Please note that not all topics in the book will be treated.



DETAILED CLASS SCHEDULE

The course is organized into 12 SESSIONS along the following lines: (1) Overview; (2) Goals and Objectives; and (3) Activities and Assignments.

10. SCHEDULE OF SESSIONS

Week	Session
1	Sessions 0
2	Session 1
3	Sessions 2
4	Sessions3
5	Session 4
6	Session 5
7	Session 6
8	Session 7
9	Session 8
10	Session 9
11	Session 10
12	Session 11
13	Session 12

11. SESSION 0 - INTRODUCTION TO UGRC 150

11.1 Overview

Introduction to the nature of this course, orientation to the use of the Sakai Learning Management System (LMS) and the available tools for the course.

11.2 Goals and Objectives

At the end of the session, the student will

- 1. Understand the subject matter of this course (Critical Thinking & Practical Reasoning) and how the course is organized.
- 2. Understand logic as a tool in the discipline of philosophy
- 3. Become familiar with the tools in the Sakai LMS to be used in the course.
- 4. Do self-introduction and discuss the expectations for the course in the Chat Room

11.3 Activities and Assignments

- 1. Log onto the UG Sakai LMS course site: http://sakai.ug.edu.gh/XXXXXXXXX
- 2. Watch the Video for Session 1 Course Introduction
- 3. Visit the Chat Room and introduce yourself while discussing expectations for the course
- 4. Explore the online tools available in Sakai.

12. SESSION 1 - THOUGHTS AS OBJECTS OF SCRUTINY

12.1 Overview

Humans are thinking beings and they very often express their thoughts in the form of language. This session seeks get students to understand the need and how to treat their thoughts as objects of study. Here, students will be taught the following: sentences and statements; declarative, imperative and interrogative sentences; and also study the distinction between sentence fragments and emotive expressions..

12.2 Goals and Objectives

At the end of the session, the student will

- 1. Be able to tell what a sentence is.
- 2. Be able to identify the subject and predicate of a sentence.
- 3. Be able to tell how a sentence differs from a statement.
- 4. Be able to why some interrogatives may be imperatives
- 5. Understand types of declarative sentence.
- 6. Be able to contrast factual sentence with imperative.
- 7. Understand the difference between sentence fragments and emotive expressions.

12.3 Activities and Assignments

This week, complete the following tasks:

- 1. Log onto the UG Sakai LMS course site: http://sakai.ug.edu.gh/XXXXXXXXX
- 2. Read Unit 1 of Recommended Text pages 4-13
- 3. Watch the Videos for Session 1 Thoughts as Objects of Scrutiny (Part 1)
- 4. Review Lecture Slides: Session 1 Thoughts as Objects of Scrutiny (Part 1)
- 5. Visit the Chat Room and discuss the Forum question for Session 1
- 6. Complete the Individual Assignment for Session 1

13. SESSION 2 - DEFINITIONS - PART ONE

13.1 Overview

Contrary to what many students might suppose before their exposure to this course, there are different types of definition. The type of definition found in the dictionary which is also the one with which students are familiar, is just one of six definitions that will be discussed. In this session, a distinction will be made between connotation and denotation of a word, after which the lexical, ostensive, operational and theoretical definitions will be discussed.

13.2 Goals and Objectives

At the end of the session, the student will

- 1. Understand and explain when either the connotation or denotation of a word is implied in a definition.
- 2. Be able to identify the differences and relationships that exist between the definitions mentioned above.
- 3. Be able to write good examples of these definitions.



13.3 Activities and Assignments

This week, complete the following tasks:

- 1. Log onto the UG Sakai LMS course site: http://sakai.ug.edu.gh/XXXXXXXXXX
- 2. Watch the Videos for Session 3 Definitions (Part 1)
- 3. Review Lecture Slides: Session 3 Definitions (Part 1)
- 4. Read Unit 2 of Recommended Text pp. 16-22.
- 5. Visit the Chat Room and discuss the Forum question for Unit 2
- 6. Complete the Individual Assignment for Session 3 Part 1

14. SESSION 3 - DEFINITIONS - PART TWO

14.1 Overview

In this session, we shall continue with the discussion of the types of definition. Specifically, only stipulative and real definitions will be handled. Then, we shall look at what it is for a term to be well-defined or open textured, and finally diagnose problems with definitions.

14.2 Goals and Objectives

At the end of the session, the student will

- 1. Understand the different ways a real definition could be called and the importance of such a definition.
- 2. Be able to recognize when a definition is vague.
- 3. Be able to recognize when a definition is circular.
- 4. Be able to recognize when a definition is too narrow.
- 5. Be able to recognize when a definition is too broad.
- 6. Explain why well-defined term, unlike an open textured, is most preferred amid the difficulty in achieving the former.

14.3 Activities and Assignments

This week, complete the following tasks:

- 1. Log onto the UG Sakai LMS course site: http://sakai.ug.edu.gh/XXXXXXXXX
- 2. Watch the Videos for Session 4 Definitions Part 2
- 3. Review Lecture Slides: Session 3 Definitions Part 2
- 4. Read Unit 2 of Recommended Text pages 22-33
- 5. Visit the Chat Room and discuss the Forum question for Session 4 Part 2
- 6. Complete the Individual Assignment for Session 4 Part 2

15. SESSION 4 - SELF EVALUATION

Students are expected to engage in self evaluation or revision, and intensify their handling of UGRC course materials and questions in order to enhance their chances of doing well in the Interim Assessment to be held within this week.



16. SESSION 5 - CONTRASTING TYPES OF DISCOURSE

16.1 Overview

Individuals engage in a discourse, normally, with the intention of being understood. Yet, they sometimes end up in dispute over the meaning of terms, which are caused by different factors. This session introduces students to those factors and how to avoid them.

16.2 Goals and Objectives

At the end of the session, the student will

- 1. Understand types of dispute
- 2. Understand the difference and relationship between metaphors and proverbs
- 3. Understand linguistic vices such as equivocation and vagueness, and how to avoid them.
- 4. Understand the types of discourse revealed in passages.

16.3 Activities and Assignments

This week, complete the following tasks:

- 1. Log onto the UG Sakai LMS course site: http://sakai.ug.edu.gh/XXXXXXXXX
- 2. Watch the Videos for Session 5 Contrasting Types of Discourse
- 3. Review Lecture Slides: Session 5 Contrasting Types of Discourse
- 4. Read Chapter 3 of Recommended Text -pages 34-56
- 5. Visit the Chat Room and discuss the Forum question for Session 5
- 6. Complete the Individual Assignment for Session 5

17. SESSION 6 - THE NORMATIVE AND THE EMPIRICAL (PART 1)

17.1 Overview

In session 1, it was mentioned that declarative sentences included value judgements and factual judgements. This session is meant to discuss these judgements further, referring to value judgements as normative sentences and factual judgements as empirical sentences.

17.2 Goals and Objectives

At the end of the session, the student will

- 1. Be able to identify factual sentences and value judgements.
- 2. Understand that a sentence could be both normative and empirical.

17.3 Activities and Assignments

- 1. Log onto the UG Sakai LMS course site: http://sakai.ug.edu.gh/XXXXXXXXX
- 2. Watch the Videos for Session 6 The Normative and the Empirical
- 3. Review Lecture Slides: Session 6 The Normative and the Empirical
- 4. Read Unit 5 of Recommended Text -pages 92-99
- 5. Visit the Chat Room and discuss the Forum question for Session 6



6. Complete the Individual Assignment for Session 6

18. SESSION 7 -THE NORMATIVE AND THE EMPIRICAL (PART 2)

18.1 Overview

This session is a continuation of the discussion of Unit 5 of the recommended text for the course. It builds on the knowledge gained in session 6 above. It also discusses law and the different senses in which it could be understood

18.2 Goals and Objectives

At the end of the session, the student will

- 1. Be able to identify and explain the senses of law.
- 2. Understand the difference between law-like hypothesis and theoretical definitions.

18.3 Activities and Assignments

This week, complete the following tasks:

- 1. Log onto the UG Sakai LMS course site: http://sakai.ug.edu.gh/XXXXXXXXX
- 2. Watch the Videos for Session 7 The Normative and the Empirical (Part 2)
- 3. Review Lecture Slides: Session 7 The Normative and the Empirical (Part 2)
- 4. Read Unit 5 of Recommended Text -pages 80-91
- 5. Visit the Chat Room and discuss the Forum question for Session 7
- 6. Complete the Individual Assignment for Session 7

19. SESSION 8 - DEDUCTION VS. INDUCTION (PART 1)

19.1 Overview

Students will be taught how arguments are constructed in the forms of deduction and induction. This will be done in order to teach them the requirements of these arguments for intellectual acceptability.

19.2 Goals and Objectives

At the end of the session, the student will

- 1. Be able to explain bad and good ways of distinguishing between deductive and inductive arguments.
- 2. Understand the difference between particular and general statements.
- 3. Understand the difference between reference class and attribute class of a statement.

19.3 Activities and Assignments

- 1. Log onto the UG Sakai LMS course site: http://sakai.ug.edu.gh/XXXXXXXXX
- 2. Watch the Videos for Session 8 Deduction vs. Induction Part 1
- 3. Review Lecture Slides: Session 8 Deduction vs. Induction Part 1
- 4. Read Unit 6 of Recommended Text —pages 100-111
- 5. Visit the Chat Room and discuss the Forum question for Session 8
- 6. Complete the Individual Assignment for Session 8



20. SESSION 9 - DEDUCTION VS. INDUCTION (PART 2)

20.1 Overview

Valid arguments may take varied forms. In this course, students will be introduced to syllogisms only. Understanding of syllogisms will be adequate following the discussion that took place in session 8.

20.2 Goals and Objectives

At the end of the session, the student will

- 1. Be able to identify and construct arguments that are syllogistic.
- 2. Identify syllogisms as they are written with universal negations.
- 3. Familiar with syllogistic fallacies.

20.3 Activities and Assignments

This week, complete the following tasks:

- 1. Log onto the UG Sakai LMS course site: http://sakai.ug.edu.gh/XXXXXXXXX
- 2. Watch the Videos for Session 9 Deduction Vs. Induction Part 2
- 3. Review Lecture Slides: Session 9 Deduction Vs. Induction Part 2
- 4. Read Unit 6 of Recommended Text pages 112-122
- 5. Visit the Chat Room and discuss the Forum question for Session 9
- 6. Complete the Individual Assignment for Session 9

21. SESSION 10 - INDUCTIVE REASONING IN THE SCIENCES & EVERYDAY LIFE (PART 1)

21.1 Overview

This session is dedicated to inductive reasoning (as found in the sciences and everyday life). It is to enable students to know the methods of scientific or empirical research – how data are presented and conclusions drawn. And the quality of reasoning contained in scientific or empirical claims.

21.2 Goals and Objectives

At the end of the session, the student will

- 1. Be able to distinguish between verifiable and confirmable statements
- 2. Types of hypothesis
- 3. Account for the predictive power of hypotheses

21.3 Activities and Assignments

- 1. Log onto the UG Sakai LMS course site: http://sakai.ug.edu.gh/XXXXXXXXX
- Watch the Videos for Session 10 Inductive Reasoning in the Sciences & Everyday Life (Part 1)
- 3. Review Lecture Slides: Session 10 Inductive Reasoning in the Sciences & Everyday Life (Part 1)
- 4. Read Unit 7 of the recommended text pages 134-143
- 5. Visit the Chat Room and discuss the Forum question for Session 9
- 6. Complete the Individual Assignment for Session 10

22. SESSION 11 – INDUCTIVE REASONING IN THE SCIENCES & EVERYDAY LIFE (PART 2)

22.1 Overview

An important way of engaging in inductive reasoning is to provide a list of evidences that serves as the basis for a conclusion. This sort of induction is described as enumerative. In this session, attention is paid to enumerative induction and its accompanying issues.

22.2 Goals and Objectives

At the end of the session, the student will

- 1. Understand enumerative induction.
- 2. Relate enumeration to statistical and law-like hypothesis
- 3. Virtue of uncertainty in science

22.3 Activities and Assignments

This week, complete the following tasks:

- 1. Log onto the UG Sakai LMS course site: http://sakai.ug.edu.gh/XXXXXXXXXX
- 2. Watch the Videos for Session 11 Inductive Reasoning in the Sciences & Everyday Life (Part 2)
- 3. Review Lecture Slides: Session 11 Inductive Reasoning in the Sciences & Everyday Life (Part 2)
- 4. Read Unit 7 of recommended text pages 143-153
- 5. Visit the Chat Room and discuss the Forum question for Session 11
- 6. Complete the Individual Assignment for Session 11

23. SESSION 12 - POLEMICAL TRICKS AND RHETORICAL PLOYS

23.1 Overview

It is the expectation of philosophers and, indeed, all humans that reasons are provided for the positions/conclusions that are held. However, people sometimes pretend to provide reasons for their conclusion in an attempt to persuade or manipulate. Various ways in which this occurs are discussed in this session. Only the fallacies mentioned below should be learnt for the End of Semester Examination.

23.2 Goals and Objectives

At the end of the session, the student will

- 1. Be able to explain what fallacy is.
- 2. Be able to distinguish between polemic and rhetoric.



- 3. Understand the three broad categories fallacy.
- 4. Understand the fallacy of equivocation, begging the question, appeal to pity, grandstanding, ad hominem, illegitimate appeal to authority, appeal to force, and hasty generalization.

23.3 Activities and Assignments

- 1. Log onto the UG Sakai LMS course site: http://sakai.ug.edu.gh/XXXXXXXXX
- 2. Watch the Videos for Session 12 Polemical Tricks & Rhetorical Ploys
- 3. Review Lecture Slides: Session 12 Polemical Tricks & Rhetorical Ploys
- 4. Read Unit 10 pages 203-221.
- 5. Visit the Chat Room and discuss the Forum question for Session 12
- 6. Complete the Individual Assignment for Session 12