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Dental Hygiene (DNTL) 1517 Critical Thinking for Health Sciences (1.5 Units) CSU  
[formerly Dental Hygiene 17]

Prerequisite: Acceptance into Dental Hygiene Program

Advisory: Eligibility for English 1000 and Reading 1005 strongly recommended

Total Hours: 24 hours lecture

Catalog Description: The Introduction to Critical Thinking for Health Sciences course is designed to improve students' reasoning process. Instruction consists of creating argument maps, analyzing the validity of arguments, creating valid arguments, critiquing assumptions within arguments, distinguishing between induction and deduction, and in arriving at valid and supportable conclusions. Special emphasis is placed on reasoning and problem solving in health care.

Type of Class/Course: Degree Credit

Text: Fisher, Alec. Critical Thinking. Cambridge University Press, 2001.

Additional Instructional Materials: Computer access with Reason!able software.

Course Objectives:

By the end of the course, a successful student will be able to:

1. define key critical thinking terms,
2. demonstrate knowledge of the historical development of the field of critical thinking,
3. explain the purpose and applicability of critical thinking,
4. apply critical thinking methods to reach reasonable conclusions,
5. identify the presence and absence of reasoning,
6. propose viable solutions to vague reasoning,
7. judge the context of a claim and its evidence,
8. explain the structure of reasoning about causality,
9. identify and distinguish deductive and inductive arguments,
10. evaluate the acceptability of arguments,
11. construct argument maps from written texts,
12. distinguish arguments from explanations,
13. identify assumptions of arguments,
14. identify and evaluate premises of arguments,
15. identify and evaluate conclusions of arguments,
16. evaluate the use of scientific data, and
17. use scientific data effectively in argumentation and reasoning.

Course Scope and Content:

UNIT ONE: What is critical thinking?

- A. Definitions and key terms of CT.
- B. Important historical ideas concerning CT.
- C. The purposes of CT.
- D. Reading and understanding arguments.

Learning Outcomes	Assessment
Students offer definitions of CT.	Oral
Students demonstrate understanding of key terms in CT.	Quiz
Students demonstrate familiarity with key historical ideas in the field of CT.	Oral
Students explain the purpose and applicability of CT.	Oral
Students identify specific places within written texts and spoken arguments that require CT in order to reach a reasonable or truthful conclusion.	Quiz, handouts, self-assessment.

UNIT TWO: Reasons and conclusions

- A. Identifying reasoning and reasons.
- B. The terminology of reasoning.
- C. Introduction to Reasonable software

Learning Outcomes	Assessment
Students correctly identify the presence and absence of reasoning.	Worksheets, quizzes
Students correctly employ CT terms.	Oral
Students demonstrate the ability to construct argument maps.	Use Reason!able
Students apply argument mapping to basic argument examples maps using Reason!able.	Use Reason!able

UNIT THREE: Different ways of reasoning

- A. Chains of reasoning
- B. Joint reasons
- C. Disjunctions

Learning Outcomes	Assessment
Students will make argument maps of reasoning chains from written texts.	Use Reason!able
Students will make arguments maps of joint reasoning structures from written texts.	Use Reason!able
Students will identify disjunctions.	Worksheets
Students will create argument maps from disjunctions.	Use Reason!able

UNIT FOUR: Arguments, explanations, and assumptions

- A. Distinguishing arguments from explanations
- B. Identifying assumptions

Learning Outcomes	Assessment
Students will correctly distinguish arguments from explanations.	Worksheets, use Reason!able
Students will identify assumptions of arguments.	Worksheets, use Reason!able

**Learning Activities Required Outside of Class:**

The students in this class will spend a minimum of 3 hours per weeks outside of the regular class time doing the following:

1. Studying
2. Answering questions
3. Completing required reading
4. Completing argument mapping
5. Completing written work

**Methods of Instruction:**

1. Lectures
2. Arguments mapping with Reason!able software

**Methods of Evaluation**

1. Group presentations
2. Written assignments
3. Quizzes
4. Argument mapping