

EFFECTIVE: JANUARY 2002 CURRICULUM GUIDELINES

| Division: | | INSTRUCTIONAL | | | Date: | | OCTOBER 2001 | | |
|-----------|--|------------------------|---------------------|----------------------|-------|----------------------------------|------------------|----------|--|
| | partment/ ogram Area: | PSYCHOLOG HUMANITIE | S & SOCIAL SCIENCES | | | New Course | Revision | X | |
| | | | | | | If Revision, Section(s) Revised: | P,Q,R | | |
| | | | | | | Date Last Revised: | MARCH 1996 | | |
| C: | PSYC 360 D: | | | COGNITIVE PSYCHOLOGY | | E: 3 | | | |
| | Subject & Course No. | | | Descriptive Title | | | Semester Credits | | |
| F: | Calendar Description: This course provides an introduction to the psychology of cognition and is concerned with the methods and theories relevant to thinking and related processes. Concept formation, problem solving, reasoning, decision making, and the relation of language to thought will be covered. The influence of individual differences, social factors, artificial intelligence, and biology will be included as well as the practical applications of research in cognition Allocation of Contact Hours to Types of H: Course Prerequisites: | | | | | | | | |
| G: | Instruction | n/Learning Setti | ngs | | n. | Course Prerequisites: PSYC 200 | | | |
| | Primary Methods of Instructional Delivery and/or Learning Settings: | | | | I. | Course Corequisites: | | | |
| | | | | Lecture | | NONE | | | |
| | Number of Contact Hours: (per week / semester for each descriptor) | | | | J. | Course for which this Co | ourse is a Prere | quisite: | |
| | Lecture: | 4 hrs. p | er week / sem | ester | K. | Maximum Class Size: | | | |
| | Number of Weeks per Semester: 14 | | | | 35 | | | | |
| L: | PLEASE INDICATE: | | | | | | | | |
| | Non-C | Credit | | | | | | | |
| | College Credit Non-Transfer | | | | | | | | |
| | X College Credit Transfer: Requested Granted X | | | | | | | | |
| | | | | • | _ | → www.bccat.bc.ca) | _ | | |

M: Course Objectives/Learning Outcomes

At the conclusion of the course the student will be able to:

- 1. List the major historical figures in the history of cognitive psychology and describe their contribution.
- 2. Define cognition and describe the various types of cognition included in the definition.
- 3. Describe the major contemporary theoretical approaches in cognitive psychology.
- 4. Describe concept formation and attainment and the role of perceptual and memory processes.
- 5. Explain the similarities and differences between individual and group problem solving.
- 6. Describe the similarities and differences between human reasoning and artificial intelligence reasoning.
- 7. Describe the dynamics of decision making processes and boundaries of "rational decision making".
- 8. Describe the role of language and imagery in cognition.
- 9. Describe the role of individual differences in cognitive style and cognitive ability.
- 10. Run simple simulations of cognitive processes on a microcomputer using packaged software.
- 11. Locate and use internet resources in Cognitive Psychology.

N: Course Content

1. <u>Historical Context</u>

The rationalistic tradition

Scientific decision making

The behaviourist tradition

The cognitive revolution

2. <u>Biological Processes</u>

Neural networks

Rhythms and cycles

3. <u>Perceptual Processes</u>

Sensory memories

Pattern recognition in humans and machines

Attention

4. Memory Processes

Models of memory

Short term memory

Arousal and memory

Practical implications

Course Content Cont'd.

5. <u>Imagery</u>

Characteristics of images

Imagery and memory

Cognitive maps

Graphical computer interfaces

6. <u>Language</u>

Understanding language

Computers and language representation

Producing language

Remembering language

Reading

Language translation

7. <u>Concepts and Categories</u>

Methods of researching

Factors affecting concept formation

Testing hypotheses

Natural categories

Statistical methods of categorization

8. <u>Problem Solving</u>

Problem representation

Strategies and heuristic

Ill-defined problems

Creativity

Computational explorations of creative processors

9. <u>Reasoning</u>

Linear series problems

Propositional reasoning

Syllogisms

Analogies

First order predicate logic

10.

10. <u>Decision Making</u>

Representativeness

Availability

Social judgement and bias

Mathematical modeling judges policy

11. <u>Individual Differences</u>

In memory processes

In language usage

In concept formation and problem solving

In cognitive styles

Thinking as measurable ability

Course Content Cont'd.

12. <u>Artificial Intelligence</u>

Expert systems

Decision support systems

13. <u>Social Cognition</u>

Group problem solving

Consensual social reality

Game playing and simulation

O: Methods of Instruction

This course will employ a number of instructional methods to accomplish its objective and will include some of the following:

- lectures
- audio-visual materials
- small group discussion
- research projects
- computer based cognitive simulation exercises
- mediated electronic forums/discussion groups
- internet-based individual and small group assignments

P: Textbooks and Materials to be Purchased by Students

One or more of:

Anderson, John, R., (2000) Cognitive Psychology and its Implications (5th ed.). Salt Lake City, Utah: Worth Publishers

Solso, Robert, L. (2001) Cognitive Psychology (6th ed.). New York: Allyn & Bacon Publishers

Text will be updated periodically.

Q: Means of Assessment

Evaluation will be carried out in accordance with the Douglas College policy. Evaluation will be based on some of the following: quizzes, multiple choice type exams, essay type exams, term paper or research project, computer based assignments, internet based assignments, quality of participation in class discussions. An example of one evaluation scheme is as follows:

| 10 quizzes | 25% |
|--------------------------|-----|
| 5 homework assignments | 10% |
| Small group assignments | 10% |
| Class discussion quality | 10% |
| Term project paper | 20% |
| Midterm exam | |

Whaterin exam

Final exam <u>15%</u>

100%

10%

| R: | Prior Learning Assessment and Recognition: specify whether | her course is open for PLAR | | | | | |
|--|--|---|--|--|--|--|--|
| No. Given that this course involves theoretical and empirical analyses of cognitive psychology, it is unlikely to be open for PLAR except as a credit transfer from another institution. | | | | | | | |
| | | | | | | | |
| Course Designer(s) | | Education Council/Curriculum Committee Representative | | | | | |
| Dean | /Director | Registrar | | | | | |

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