

## I. COURSE DESCRIPTION

The major goal of this course is for you to **understand and use** research from the areas of cognitive development, cognitive approaches to teaching and learning, and motivation in a wide variety of contexts: from P - 16 schools, to the wellness center, to training in the work context. In this course you will learn and understand effective concepts and practices as demonstrated by research and informed practice. Standards and principles of teaching and learning help to guide quality pedagogy. The content of this course reflects the knowledge base of educational psychology that has accrued as a result of research in cognition and teaching during the past two decades. In this course, INTASC and NBPTS standards Learner Centered Principles, as described by the American Psychological Association, provide guidance in effective teaching and provide guidance in optimal learning.

A challenge for education is valuing diversity and fostering equity (Banks, 2000). Decades of research in teaching and learning provide possibilities for enhancing achievement in all students from children to college/adult and in all situations from homogeneous to culturally diverse settings. Application of the knowledge and concepts you will learn in this course will enable you to analyze your teaching practice, develop new teaching strategies such as cooperative learning and learning strategies and to diagnose and remediate learning problems. Research synthesized by Darling-Hammond (2000) concludes that differences in teacher effectiveness is a stronger determinant in student learning than class size or student characteristics. There is so much knowledge that can improve teaching and learning that the crucial aspect in application is **decision-making, knowing "when to use what"; choosing powerful strategies as opposed to seductive but unsupported approaches.** The charge for you is: “learn with the goal of making a difference.”

## II. RATIONALE

See above.

## III. COURSE GOALS/OBJECTIVES

This introductory unit lays the groundwork for the remaining units. It will enable you to:

1. Gain a perspective on the current knowledge base in teaching and learning and reform in education, recognizing gaps between policy reform and classroom practice. Jones (1987) article is a case in point. **ELCC 3.3**
2. Describe and differentiate among research methods currently used to study teaching, learning, and motivation (**ELCC 3.3**).

3. Interpret and self-evaluate the themes that underlie a cognitive approach to educational psychology (ELCC 3.3).
4. Identify areas of development, teaching, learning, and motivation that are reframed based on current research (ELCC 3.3).

## **UNIT ONE: COGNITIVE DEVELOPMENT, INFORMATION PROCESSING AND INTELLIGENCE**

This unit focuses on the study of development of thinking and memory processes, and current views of intelligence. The topics will enable you to understand what David Perkins (1995) calls, "**learnable intelligence.**" Teachers' erroneous beliefs about learning and intellectual development lead to inequality in opportunities for learning for many students, particularly those in diverse populations.

1. In the area of cognitive development, you will summarize and classify the distinguishing features of each of Piaget's stages of reasoning, as well as recognize examples and derive implications for instruction and the principles of student growth and development (ELCC 3.3).
2. From the Gallimore & Tharp chapter (*reading list*) you will understand cognitive development from Vygotsky's socio-cultural perspective in concert with Piaget's theory, and identify implications for instruction through assisted learning within the learner's Zone of Proximal Development (ZPD) (ELCC 3.3; 5.1).
3. Describe and explain the modal memory model, the functions of each component and the implications for effective use for more strategic learning and assessment of student progress (ELCC 3.3; 3.9).
4. Differentiate among the three basic forms of encoding: rehearsal, organization, and elaboration with application to your own learning and the learning of students in your classroom or school (ELCC 3.3; 3.9).
5. Understand current views of intelligence and IQ as described by the Sternberg (1995) article and evaluate your own beliefs about intelligence. You will also be able to recognize and thoughtfully critique misconceptions regarding intelligence (e.g., the *Bell Curve*) (ELCC 5.1).
6. Based on understanding of Sternberg, Gallimore and Tharp, Piaget, and Vygotsky, reflect on your own beliefs and potential, diversity, and equity (ELCC 3.3).

## **UNIT TWO: MOTIVATION FOR TEACHING AND LEARNING**

The third unit of study is motivation. The term motivation is used broadly because current motivation theory and research encompass many specific topics. The topics in this course are based on a social-cognitive perspective which has generated much research relevant for educational practice. Understanding social cognitive perspectives are essential for establishing a classroom climate that promotes motivational equality for optimum intellectual development. Educators have two roles for supporting and cultivating motivation: 1) establishing the classroom structure and instruction that provides the environment for optimal motivation, engagement, and learning; 2) helping students develop the tools for self-regulation in

all endeavors. To do this requires the examination of educators' motivation, teacher efficacy and expectations. Motivation is often omitted from school reform initiatives. Darling-Hammond states that "motivation is critical because achieving understanding is difficult. Teachers must know how to structure tasks and feedback so as to encourage extensive student effort without either relinquishing the press for understanding when the going gets tough or discouraging students so that they give up altogether" (1997, p. 296).

1. Explain possible causes of lack of student motivation and consider motivational problems through the lenses of "motivational equality and inequality" and reflect on this issue from your own environment and experience (ELCC 3.3; 3.9; 5.1).
2. Explore classroom and school-wide policies that promote and support adaptive motivation (ELCC 5.1)
3. Understand motivational perspectives of attribution processes, intrinsic and extrinsic motivation, goal orientation, self-worth, and self-efficacy judgments; recognize examples of each and generate strategies to develop and maintain adaptive motivation (ELCC 3.3)
4. Examine the role of teacher motivation through the components of expectations and teacher efficacy and reflect on your own efficacy and expectations (ELCC 5.1).
5. Consider matters of culture and motivation. Identify motivational qualities that can be seen as neutral between diverse cultures, valued by those cultures, and at the same time recognize individual differences among diverse cultures (ELCC 3.3).
6. Explain motivational aspects of the social context and identify key factors in establishing a positive social climate, including the role of cooperative learning (ELCC 3.3).

### **UNIT THREE: COGNITIVE APPROACHES TO TEACHING AND LEARNING**

This unit focuses on ways teachers can enhance learning and thinking through strategies drawn from cognitive instruction. This includes effective teaching practices, reading comprehension (Palinscar & Brown, 1984), learning strategy instruction (Gaskins, 1988; Pressley, 1989), metacognition, and cognitive instruction (Bransford, Goldman, & Vye, 1991).

1. Describe components and processes of information processing and higher order thinking and draw implications for practice (ELCC 5.1).
2. Describe and evaluate promising approaches to cognitive strategy instruction ((ELCC 5.1).
3. Develop a profile of a "good strategy user in your field ((ELCC 5.1)."

4. Describe and practice problem solving models and strategies, and identify strategies for teaching.
5. From a cognitive approach, draw implications for the design and use of technology ((ELCC 5.1
7. The major outcome of this unit is that you should know these processes well enough that you can teach, "**learning how to learn.**" You will be using some of the strategies throughout the course. Hopefully you will also improve your own learning and thinking strategies ((ELCC 3.9).
8. Draw implications from cognitive science for the selection and use of technology to advance learning ((ELCC 5.1).

#### IV. COURSE OUTLINE

1 1/17	Intro to Educational Psychology and Research on teaching		
2 1/24	Cognitive Development	CPI 1; PP 1-8	Evertson & Emmer, "Beginning School year, <b>abstract 1 due</b> Jones, "Cognitive Approach;.
3 1/31	Cognitive Development and ZPD	CPI 2; PP	Gallimore & Tharp, "A Theory of Teaching" (ZPD), Flavell, Piaget's Legacy W/formal reasoning
4 2/7	Development of memory & intelligence	CPI ch 3: pp. 46-49, Ch 4	Sternberg, Myths and truths intelligence
5 2/14	<b>Exam 1</b>		
6 2/21	Motivation	Alderman: 1, 2 Problems & equality, attribution	<b>abstracts 2 &amp; 3 due</b> <b>Proposal #1 due</b>
7 2/28	Motivation	Alderman: Cont. 2, 3, 4. concepts of ability:	Alderman, "Motivation for at-risk" Slavin, "Synthesis of Research cooperative learning
8 3/7	Motivation	Alderman, 5, 6, 7. teacher motivation, self-regulation, social context	Corno, Student volition and education
9 3/14	Motivation	Alderman, 8, 9. Tasks, incentives, evaluation	Ames, "Classroom goals" Borkowski, "Self-regulation and motivation" <b>Proposal #2 due</b>
10 3/21	<b>Exam 2</b>		
12 4/11	Cognitive approaches teaching, learning and instruction	*CPI 3, review ch 4, ch. 7	Review Jones; Gaskins, "Thinking Coaches"
13 4/18	Learning strategies	CPI 4, 5	Pressley, et al "Strategies that improve student comprehension"
14 4/25	reading comprehension.	CPI 8,	Palinscar & Brown, "Reciprocal Teaching

	problem solving		<b>Paper due</b>
15 5/2	Effective teaching		Bransford, Goldman, Vye; making a difference; Cognitive Research;" Porter & Brophy, "Synthesis of Research" on teaching
16 5/19	<b>Final Exam</b>		

## V. REQUIRED/OPTIONAL TEXTS

- *Cognitive Psychology and Instruction, 3rd Ed.* Bruning, Schraw, & Ronning
- *A Piagetian Primer*, Singer & Revenson, Rev. Ed.
- *Motivation for Achievement: Possibilities for Teaching and Learning*, Alderman,
- articles: Electronic and hard copy reserve

## VI. INSTRUCTIONAL STRATEGIES/ACTIVITIES/TECHNOLOGY

The instructional methods and learning activities are those that are most likely to maximize your active engagement and higher level thinking (e.g., constructing support, error analysis, compare and contrast, application, etc. (See **BLUE** handout). You will be expected to be prepared by reading all assigned materials and being prepared to engage in group work and other activities incorporating the concepts from the readings. Among the methods and activities are:

	Knowledge Base	Diversity	Technology
Cooperative learning	X	X	
Problem solving tasks	X		
Videos for concept presentation and illustration of exemplary practice	X	X	X
Lecture-discussion, demonstration	X	X	
Model problem solving	X		
Case studies/authentic tasks for decision making	X		
Technology literacy activities: visual aids, video, web, internet, e-mail, inspiration	X		X
Field experiences and clinical experiences	X		X

## VII. EVALUATION/STUDENT ASSESSMENT

Evaluation will be based on exams, a project/paper, research article abstracts, and attendance and participation. Major criteria for all written assignments is the use of higher level thinking skills: conceptual understanding, analysis, error analysis, decision making, generalization, and implications. See the specific rubrics for essay exams and the

project/paper. The **BLUE** handout includes resources to help you further develop your own thinking skills. You are expected to be prepared to contribute to the group tasks.

### Exams (200 POINTS)

There will be three exams. The first two exams will consist of 30-point multiple choice and 35-point essay. The final will consist of a 70 point essay, Unit III and comprehensive. The grading scale is based on 100% criterion, i.e., 90%-100 = A, 80% = B, 70% = C with pluses and minuses. If you do not make at least a B, you will have opportunity to retest to meet this criterion at the discretion of the instructor. A test may be retaken to improve mastery of the material. Your two scores will be averaged and added to your score on the other portion for your total test score. Before any retake, you must have a brief conference with your instructor to go over the concepts missed (incorrect items); you must also write out a definition and contextual explanation of each concept to be turned in when you make up the test. See schedule for topics and dates.

### Project/Paper 100 points (10-12 pages rule of thumb)

The project/paper is a combination review of literature and application. It is designed for you to use the theories and research findings from this course content to improve your own practice (whether it is teaching, parenting, administration, counseling, or coaching, etc.). The emphasis is on demonstrating that you understand and can apply the concept. The suggested number of pages is a guideline. The most important consideration is your understanding of the topic and the use of relevant literature with relevant applications. Revisions are permitted with instructor's approval for projects scoring Category II or below as defined by the rubric. **ELCC 5.1**

### Abstracts (20 points)

Read and abstract three (3) research articles from **professional journals**. The purpose of this assignment is to learn to read and interpret key findings from research studies. The first abstract, from effective teaching research, is the Evertson/Emmer study in your list of required readings. This is due the second class. Choose the remaining two from professional journals, (not from the internet) one on **motivation** and one on **cognition**. **See schedule for due dates..** The abstracts are judged acceptable or unacceptable. **ELCC 5.1**

### Attendance/participation

An important learning activity is discussion and application of the required articles in cooperative learning groups. Thus it is crucial that each student be prepared for the discussion. Points may be deducted for lack of preparation and participation. A possible activity is weekly "2 minute papers." Points may be deducted for more than one absence at discretion of instructor.

EXAMS	200 points
PROJECT/PAPER	100
ABSTRACTS	20
ATTENDANCE/ PARTICIPATION	10

A = 330-307 93% ; A- = 306-297 90% ; B+ = 296-287 87% ; B = 286-274 83% ; B- = 273-264 80% ; C+ = 263-254 77%.

## VIII. STUDENT ETHICS AND OTHER POLICY INFORMATION

For further information about The University of Akron's policies regarding student ethics and conduct, please consult the following sources:

<http://www3.uakron.edu/gradsch/gradbull.html>, then select "General Information" (academic honesty); or [www.uakron.edu/studdev/conduct.html](http://www.uakron.edu/studdev/conduct.html) (Student Code of Conduct). Any student who feels she/he may need an accommodation based on the impact of a disability please consult [www.uakron.edu/access](http://www.uakron.edu/access) and the Office of Accessibility at (330) 972-7928.

### **Plagiarism Policy**

You are expected to behave in a professional, ethical manner in this class, including being responsible for your own work and use of references. When you refer to/use/discuss concepts, ideas, suggestions, etc., from **ALL** sources, you will cite the reference you are using. When you are quoting this reference directly, you will put quotation marks (“ ”) and a page number after the quotation. Other sources include your textbooks, class handouts, lectures, personal communications, etc.

Plagiarism is using someone else’s words and/or ideas as your own, to include very minor changes in wording.

- Original passage: “A recent editorial in the *Journal of Educational Psychology* identified plagiarism (the direct lifting of others’ words for use in one’s own publications) as an ethical issue of growing concern” (Gall, Borg, & Gall, 1996, p. 100).
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- Example of plagiarism passage: A current editorial in the *Journal of Educational Psychology* says that plagiarism (direct use of someone else’s writing for use in one’s own work) is an ethical issue of increasing concern.

Plagiarism will be penalized according to departmental policy.

## IX. BIBLIOGRAPHY

None provided.