CEP 903
Cognitive Development across the Lifespan
Spring 2015
Thursday, 12:40-3:30
132 Erickson Hall

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Course Overview
This course is designed to introduce students to multiple dimensions of cognition and learning, ranging from the basic processes underlying learning and thinking to the contexts that promote cognitive change – as well as how people think about the social contexts around them. CEP 903 familiarizes students with key theoretical perspectives that ‘frame’ how and why cognitive development occurs, empirical research regarding key domains of cognitive development, how genes and social context interact and influence cognitive change, and how people understand key aspects of their external world. We will focus on developmental changes in cognition that take place from birth through childhood and adolescence as well as into adulthood.

Course Objectives. CEP 903 is designed so that:
• Students will demonstrate an understanding of the key principles of cognition and learning.
• Students will demonstrate an understanding of the range of cognitive theories and research that can inform the design of scholarship, instruction, intervention, and policy.
• Students will demonstrate an understanding of the complex interactions between biological and social factors in the processes of cognitive development.

In addition, a grade of 3.0 or higher in CEP 903 fulfills, in part, the foundational knowledge requirement demonstrating knowledge of cognitive and social-emotional development (APA: 1a.) for students in the School Psychology program.

Course Structure and Readings. This is a doctoral seminar emphasizing critical discussion of course concepts and readings. Students will work in groups and take an active role in contributing to, leading, and shaping course discussion.

Required text:

• All other readings posted on D2L under “Course Readings.”

Course Expectations
• Academic Dishonesty – Academic dishonesty includes obvious offenses, such as copying another student's work, and less obvious offenses, such as unauthorized collaboration on a paper or copying sections of an article for an essay. Note: it is still plagiarism to change a few words in a sentence that you have otherwise copied from another source! It is assumed that all students understand the consequences of academic dishonesty at MSU.
• Incompletes – A grade of incomplete will be given only if (1) all completed work is satisfactory (i.e., averages 3.0 or better) and (2) there is a valid reason that you cannot complete the course. Students should contact me as soon as possible if interested in an incomplete.
• **Students with Disabilities** – If you are a student with a documented physical or learning disability, please contact me by the first week of class so that we can make arrangements for necessary accommodations.

**Course Assignments and Grading**
For all written course assignments, standard APA formatting applies (double-spaced, 12-point font, 1 inch margins on all sides, single-sided pages). Page limits listed below exclude title pages & reference lists.

• **Class Attendance and Participation** (5%) – This is a graduate seminar emphasizing critical discussion of course concepts and readings. Active, relevant, and regular participation in class activities is the most important requirement of the class. Students should attend every class, except in cases of illness and/or extenuating circumstances. Please come to class prepared to engage in a thoughtful and scholarly discussion of the readings.

To facilitate discussion, students should post 1 thoughtful, discussion question focused on the D2L readings before each class period. Questions will be due by **5pm on Tuesday**. These questions should be thoughtful – going beyond definitional issues or areas of confusion (if you have more basic questions, please bring them up at the start of class but do not include them in your thoughtful discussion questions that you post on D2L). **Good discussion questions have the goal of helping the class apply knowledge, elaborate on ideas, relate concepts, and evaluate perspectives.** We will use these questions to supplement our discussion. **Questions should be submitted through D2L (in the assessments tab using the folder for the relevant week).**

• **Leading Class Discussion** (15%). You will be asked to prepare a 15-20 minute presentation for one of the assigned weeks. The presentation should provide an overview of the readings and serve as an introduction to the major issues presented in the readings. Please do not simply present on each article; you should integrate across articles and present a broader overview of the topic for the week. Remember that everyone in class has already read the assigned readings – your goal is to provide a synthesis, pulling out themes and key ideas to facilitate class discussion. The presentations should include visual aids (power-point presentations) as well handouts for the class. You should integrate the class discussion questions into your presentation (note: with discussion, your presentation will likely last for at least one hour (if not longer)). The purpose of the introduction is to highlight critical issues from the articles that will serve as the basis for our discussion. You will be evaluated based on the quality and accuracy of the synthesis of the articles and the clarity of the presentation (including visual aids). **You must send your presentation to me by noon on Wednesday for review (you do not need to have the discussion questions included).**

• **Essays Sets** ($n = 3, 20\%$ each, 60\% total) – Essay sets require mastery and some integration of material from readings, lecture notes, and classroom discussions. Each essay set requires 2-4 essays of 2-3 pages each. Each set allows choice among questions (e.g., choose 3 of the 5). Questions will be distributed one week before the essay set is due. The second essay set emphasizes material covered since the first essay set and, in addition, some integration of material covered across the course. You need only draw from the course readings, lecture notes, and classroom discussions. Thus, additional sources are not necessary, nor are formal bibliographies required. Citations from the course should be explicit however – e.g., author(s), year – and the essays should be written following APA format. Unless otherwise noted, your essay set should be submitted through D2L before the start of class on the day it is due.
• **Optional Course paper** (20%) – An optional 12-15 page paper may be substituted for one of the essay sets and should address some aspect of the broad question related to cognitive development. In contrast to the essay sets, papers should include additional sources in addition to assigned readings, and a formal reference list should be appended. Your paper should draw on both theory and empirical findings and should identify important gaps and/or promising new directions in knowledge.

• **Article Reports** ($n = 4$, 5% each, 20% total) – The purpose of the article reports is to practice and improve your *written and oral summaries* of empirical research (i.e., an article reporting the gathering of data and drawing of inferences from those data). For each research report, your task is to (a) find a new study that interests you (related to cognitive development), (b) write a brief, 1-page (~300 words) summary of the study, and (c) present a 5-minute oral summary to some of your classmates. Your written research report should be submitted through D2L before the start of class on the day it is due.

• **Final Grade** - Final grades will be based on your total number of points and assigned as follows:

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<thead>
<tr>
<th>Grade</th>
<th>Points</th>
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<tbody>
<tr>
<td>4.0</td>
<td>94-100</td>
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<tr>
<td>3.5</td>
<td>89-93</td>
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<tr>
<td>3.0</td>
<td>83-88</td>
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<tr>
<td>2.5</td>
<td>78-82</td>
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<td>2.0</td>
<td>73-77</td>
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<tr>
<td>1.5</td>
<td>68-72</td>
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<tr>
<td>1.0</td>
<td>63-67</td>
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<tr>
<td>0.5</td>
<td>58-62</td>
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<td>0.0</td>
<td>&lt; 58</td>
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## Course Schedule**

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<th></th>
<th>Assignments</th>
<th>Date</th>
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<tbody>
<tr>
<td>1.</td>
<td>Introduction &amp; Orientation to Course</td>
<td>Sept 3</td>
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<tr>
<td>2.</td>
<td>Biological Underpinnings of Cognition</td>
<td>AR1 Sept 10</td>
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<td>4.</td>
<td>Sociocultural Perspectives</td>
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<td>5.</td>
<td>Information Processing</td>
<td>AR2 Oct 1</td>
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<td>6.</td>
<td>Memory</td>
<td>ES1 Oct 8</td>
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<td>7.</td>
<td>Executive Function &amp; Self-Regulated Learning</td>
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<td>8.</td>
<td>NO CLASS</td>
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<td>10.</td>
<td>Conceptual Development in Science</td>
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<td>11.</td>
<td>Problem Solving &amp; Scientific Reasoning</td>
<td>ES2 Nov 12</td>
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<td>12.</td>
<td>Language Development &amp; Literacy</td>
<td>AR4 Nov 19</td>
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<td>13.</td>
<td>NO CLASS - THANKSGIVING</td>
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<tr>
<td>15.</td>
<td>Epistemic Beliefs</td>
<td>ES3 Dec 15</td>
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**Subject to change at the instructor’s discretion.
Course Schedule & Readings
[Listed by suggested order of reading for each week]
[Except for the required text, all readings provided in D2L]

Week One: Introduction & Orientation to Course [Sept 3]
• Siegler & Alibali, CH 1
• Optional reading [REQUIRED for those students unfamiliar with Piaget]: CH 2

Week Two: Biological Underpinnings of Cognition [Sept 10]

Week Three: Self-Organization & Dynamic Systems Theory [Sept 17]

Week Four: Sociocultural Perspectives [Sept 24]
• Siegler & Alibali, CH 4

Week Five: Information Processing [Oct 1]
• Siegler & Alibali, CH 3
Week Six: Memory [Oct 8]
• Siegler & Alibali, CH 7

Week Seven: Executive Function & Self-Regulated Learning [Oct 15]

Week Eight: NO CLASS [Oct 22]

Week Nine: Conceptual Development & Mathematical Thinking [Oct 29]
• Siegler & Alibali, CH 8 (pp. 268-297), CH 11 (pp. 384-399)

Week Ten: Conceptual Change & Development in Science [Nov 5]
• Siegler & Alibali, CH 8 (pp. 297-304)
Week Eleven: Problem Solving & Reasoning [Nov 12]

- Siegler & Alibali, CH 10

Week Twelve: Language Development & Literacy [Nov 19]

- Siegler & Alibali, CH 6, CH 11 (pp. 400-421)

Week Thirteen: Thanksgiving – No Class [Nov 26]

Week Fourteen: Social Cognition [Oct 28]

- Siegler & Alibali, CH 9

Week Fifteen: Epistemological Beliefs and Cognitions