Wayne State University  
Division of Theoretical and Behavioral Foundations  
Educational Evaluation and Research

Course: EER 8840 Structural Equation Models
Credit: 4 credit hours

Semester & Year: Fall 2014  
Class Day and Time: Wednesdays 4:30 – 8:15 PM  
Location: 114.6 EDU

Instructor: Jamie Gleason, PhD  
Office Telephone: (248) 579-3784  
e-mail: jamie.gleason@wayne.edu  
Office Hours: After class or by appointment

Required Textbook:

Additional Resources:

Course Description:
Application of structural equation methods to applied educational psychology research. Model specification, estimation, and fit. Confirmatory factor analysis and correlation. Review and critique of existing literature as well as presentation of SEM content.

Course Objectives:
1. Students will be able to use AMOS to construct and evaluate structural equation models.
2. Students will be able to conduct analyses using structural equation models that are appropriate for the data and theory at hand.
3. Students will be able to draw appropriate conclusions based on structural equation models.
4. Students will be able to express structural equation models as path diagrams, systems of linear equations, and matrices. 
5. Students will be able to critically read research that involves structural equation models. 
6. Students will be able to identify and report components of a formal evaluation. 

Assignments:
1. Completion of assigned readings
2. Complete all lab assignments
3. Complete one exam
4. Complete two article reviews
5. Complete one class presentation
6. Complete SEM project

Article reviews: You will be asked to read a published research article involving the use of SEM and be asked to express your views on different components of the article.

Class presentation: Each person will be required to complete one 30-minute presentation to the class. While the subject of the presentation will be confined to the topic you choose, you have the flexibility to make the presentation your own. Presentation ideas are to be cleared with the instructor prior to the delivery. Each student will also give a brief presentation on their class projects for the last day of class (see below).

SEM project: Each person will complete a SEM project during the semester. The project will be the completion of a culminating SEM analysis incorporating the components learned through lab assignments and class discussion.

Course Policy:
All assignments are due at the specified time. Lab assignments are to be turned in no later than the following class.

Academic Dishonesty/Plagiarism
The College of Education has a “zero tolerance” approach to plagiarism and other forms of academic dishonesty. (See Student Code of Conduct http://doso.wayne.edu/assets/student-code-of-conduct-brochure.pdf). Plagiarism includes copying material (any more than 5 consecutive words) from outside texts or presenting outside information as if it were your own by not crediting authors through citations. It can be deliberate or unintended. Specific examples of academic dishonesty, including what constitutes plagiarism, can be found in the University’s Undergraduate Bulletin (http://bulletins.wayne.edu/ubk-output/index.html) and Graduate Catalog (http://www.bulletins.wayne.edu/GBK-output/index.html) under the heading “Student Ethics.” These university policies are also included as a link on Blackboard within each course in which students are enrolled. It is every student’s responsibility to read these documents to be aware which actions are defined as plagiarism and academic dishonesty. Sanctions could include failure in the course involved, probation and expulsion, so students are advised to think carefully and thoroughly, ask for help from
instructors if it is needed, and make smart decisions about their academic work.

**Evaluation:**

1. Exam 40 Points
2. The 8 best in class assignments (5 points each) 40 Points
3. Two article reviews (20 points each) 40 Points
4. Class Presentation 20 Points
5. SEM Project 40 Points

The grade distribution follows:

<table>
<thead>
<tr>
<th>Points Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>171 - 180 Points</td>
<td>A</td>
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<tr>
<td>162 - 170 Points</td>
<td>A-</td>
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<tr>
<td>157 - 161 Points</td>
<td>B+</td>
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<tr>
<td>149 - 156 Points</td>
<td>B</td>
</tr>
<tr>
<td>144 - 148 Points</td>
<td>B-</td>
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<tr>
<td>139 - 143 Points</td>
<td>C+</td>
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<tr>
<td>131 - 138 Points</td>
<td>C</td>
</tr>
<tr>
<td>126 - 130 Points</td>
<td>C-</td>
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**Enrollment/Withdrawal Policy:**

Students must add classes no later than the end of the first week of classes. This includes online classes. Students may continue to drop classes (with full tuition cancellation) through the first two weeks of the term.

Students who withdraw from a course after the end of the 5th week of class will receive a grade of WP, WF, or WN.

- WP will be awarded if the student is passing the course (based on work due to date) at the time the withdrawal is requested
- WF will be awarded if the student is failing the course (based on work due to date) at the time the withdrawal is requested
- WN will be awarded if no materials have been submitted, and so there is no basis for a grade

Students must submit their withdrawal request on-line through Pipeline. The faculty member must approve the withdrawal request before it becomes final, and students should continue to attend class until they receive notification via email that the withdrawal has been approved.

Beginning the fifth week of class students are no longer allowed to drop but must **withdraw** from classes. The last day to withdraw will be at the end of the 10th full week of classes. The withdrawal date for courses longer or shorter than the full 15-week terms will be adjusted proportionately.

See the university webpage for full details: [http://reg.wayne.edu/students/information.php](http://reg.wayne.edu/students/information.php)
**Attention Students with Disabilities:**
If you have a documented disability that requires accommodations, you will need to register with Student Disability Services (SDS) for coordination of your academic accommodations. The Student Disability Services (SDS) office is located at 1600 David Adamany Undergraduate Library in the Student Academic Success Services department. SDS telephone number is 313-577-1851 or 313-202-4216 (video phone). Once you have your accommodations in place, I will be glad to meet with you privately during my office hours to discuss your special needs. Student Disability Services’ mission is to assist the university in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at Wayne State University.

Please be aware that a delay in getting SDS accommodation letters for the current semester may hinder the availability or facilitation of those accommodations in a timely manner. Therefore, it is in your best interest to get your accommodation letters as early in the semester as possible.

**Religious Observance Policy:**
Because of the extraordinary variety of religious affiliations represented in the University student body and staff, the Wayne State University calendar makes no provision for religious holidays. It is University policy, however, to respect the faith and religious obligations of the individual. Students who find that their classes or examinations involve conflicts with their religious observances are expected to notify their instructors well in advance so that alternative arrangements as suitable as possible may be worked out.

**University Resources:**
The Writing Center (2nd floor, UGL) provides individual tutoring consultations free of charge for students at Wayne State University. While the center serves both graduate and undergraduate students, undergraduate students in General Education courses, including composition courses, receive priority for tutoring appointments. The Writing Center serves as a resource for writers, providing tutoring sessions on the range of activities in the writing process – considering the audience, analyzing the assignment or genre, brainstorming, researching, writing drafts, revising, editing, and preparing documentation. The Writing Center is not an editing or proofreading service; rather, students are guided as they engage collaboratively in the process of academic writing, from developing an idea to correctly citing sources. To make an appointment, consult the Writing Center website: [http://www.clas.wayne.edu/writing/](http://www.clas.wayne.edu/writing/).
To submit material for online tutoring, consult the Writing Center HOOT website (Hypertext One-on-One Tutoring) [http://www.clas.wayne.edu/unit-inner.asp?WebPageID=1330](http://www.clas.wayne.edu/unit-inner.asp?WebPageID=1330).
<table>
<thead>
<tr>
<th>Class</th>
<th>Date</th>
<th>Topic</th>
<th>Reading</th>
<th>In Class</th>
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<tbody>
<tr>
<td>1</td>
<td>Aug 27</td>
<td>Introduction</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>Sept 3</td>
<td>Introduction; Fundamental Concepts</td>
<td>Ch. 1, 2</td>
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<tr>
<td>3</td>
<td>Sept 10</td>
<td>Data Preparation; Computer Tools</td>
<td>Ch. 3, 4</td>
<td>A 1</td>
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<td>4</td>
<td>Sept 17</td>
<td>Specification; Identification Presentation 1 (Zsa-Zsa)</td>
<td>Ch. 5, 6</td>
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<td>5</td>
<td>Sept 24</td>
<td>Estimation Presentation 2 (Dong)</td>
<td>Ch. 7</td>
<td>A 2</td>
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<tr>
<td>6</td>
<td>Oct 1</td>
<td>No Class Article review #1 due</td>
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<td>7</td>
<td>Oct 8</td>
<td>Hypothesis Testing Presentation 3 (Andrea)</td>
<td>Ch. 8</td>
<td>A 3</td>
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<tr>
<td>8</td>
<td>Oct 15</td>
<td>Measurement Models and Confirmatory Factor Analysis</td>
<td>Ch. 9</td>
<td>A 4</td>
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<td>9</td>
<td>Oct 22</td>
<td>Structural Regression Models Presentation 5 (Sarah)</td>
<td>Ch. 10</td>
<td>A 5</td>
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<td>10</td>
<td>Oct 29</td>
<td>Exam Chapters 1 - 10</td>
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<td>11</td>
<td>Nov 5</td>
<td>Mean Structures and Latent Growth Models Presentation 6 (Heather) Project Evaluation Plans Due</td>
<td>Ch. 11</td>
<td>A 6</td>
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<td>12</td>
<td>Nov 12</td>
<td>Interaction Effects and Multilevel SEM Presentation 7 (Todd)</td>
<td>Ch. 12</td>
<td>A 7</td>
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<tr>
<td>13</td>
<td>Nov 19</td>
<td>How to Fool Yourself with SEM Article review #2 due; Presentation 8 (Don)</td>
<td>Ch. 13</td>
<td>A 8</td>
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<td>Nov 26</td>
<td>No Class Thanksgiving Holiday</td>
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<td>14</td>
<td>Dec 3</td>
<td>SEM Project Presentations</td>
<td></td>
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<tr>
<td>15</td>
<td>Dec 10</td>
<td>Final Exam Day - No Class</td>
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