CMPS 6903: Research Methods in Computer Science
SYLLABUS

Catalog Description: This graduate-level course explores techniques and conventions in the design, conduct, and support of scientific research in computer science. Students will complete a research study design cycle, culminating in a research paper in a computer science domain of the student's choice.

Instructor:	Mika Morgan, M.S., M.Ed.
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Office Hours:	MWF 10 - 11:50 am, or by appointment

Credits: 3 (3 hour lecture)
Required Textbook and Materials: No textbook. Students will use in-class materials, peer-reviewed research articles, and one free, online Coursera course

Major Topics:
1. Research Ethics, Plagiarism, and Institutional Review Board Process
2. Research Study Design Cycle
3. Literature Reviews
4. Quantitative Methods- Measurement and Sampling
5. Qualitative Methods- Measurement and Sampling
6. Data Analysis and Statistics
7. Data Visualization
8. Overleaf, LaTeX, and Citation Managers

Exams and Assignments: There are no exams in this course, although there are 2-3 quizzes. Instead, the major assignment is to complete a research study, including the design, data collection and analysis, and a detailed paper over the results. The research paper should include an abstract, introduction, literature review, methodology, results, discussion, limitations, conclusion, and all proper citations. The paper will be broken down into multiple milestones throughout the course, with frequent meetings and feedback for revision. Students are expected to contribute to the paper in a meaningful way, worthy of authorship on the paper, and to submit the paper to a reviewed venue of their choice.

Course Evaluation:

Supplemental Activities	40 pts
• Research Article Presentation	10 pts
• Research Methods Coursera Course	10 pts
• Quizzes (Intro to Research, LaTeX)	10 pts
• Self-Reflection, Submission Justification	10 pts
Research Paper	60 pts
• Project Proposal	10 pts
• Literature Review	10 pts
• Methodology	10 pts
• Results and Discussion	10 pts
• Paper First Draft	10 pts
• Paper Final Draft	10 pts

In order to help students keep track of their progress toward course objectives, the course instructor will provide grade updates using D2L. Only final grades will be reported on the students' transcripts. Students earning below a C at midterm should discuss progress with the instructor.

Grade scale breakdown:
- A: 89.5 - 100
- B: 79.5 - 89.4
- C: 69.5 - 79.4
- D: 59.5 - 69.4
- F: < 59.4

Behavior in the Classroom: Students are to assist in maintaining a classroom environment that is conducive to learning. Electronic devices should be silenced, and there should not be off-topic conversation while the instructor is lecturing. Disruptive students may be asked to leave the room.

Technical difficulty will not be considered a valid reason for an extension on submitting online materials. Computers are available on campus in various areas, as well as the Academic Success Center. Contact your instructor immediately upon having computer trouble. There is also a student help desk available to you.

Academic Misconduct Policy & Procedures: Cheating, collusion, and plagiarism (the act of using source material of other persons, either published or unpublished, without following the accepted techniques of crediting and paraphrasing, or the submission for credit of work not the individual's to whom credit is given). The Department of Computer Science has adopted the following policy related to cheating (academic misconduct). The policy will be applied to all instances of cheating on assignments and exams as determined by the instructor of the course.

- 1st instance of cheating in a course: The student will be assigned a non-replaceable grade of zero for the assignment, project or exam. *In addition, the student will receive a one letter grade reduction in course, if the grade doesn't result in a grade reduction.*
- 2nd instance of cheating in a course: The student will receive a grade of F in course & immediately be removed from course.
- All instances of cheating will be reported to the Department Chair and, in the case of graduate students, to the Department Graduate Coordinator.

Note: Letting a student look at your work is collusion and is academic misconduct!

See the MSU Student Handbook for more information on the academic misconduct policy.

Students with Disabilities: Any student who, because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make necessary arrangements. Students must present appropriate verification from the University's Disability Support Services (DSS) Office during the instructor's office hours. Please note that instructors are not allowed to provide classroom accommodation(s) to a student until appropriate verification from DSS has been provided. For additional information, contact the Disability Support Office in Clark Student Center 168. Phone: (940) 397-4140.