McLennan
COMMUNITY
COLLEGE

WACO, TEXAS

COURSE SYLLABUS
AND
INSTRUCTOR PLAN

PHYS 2389_99

Paulina Sidwell
Laura Wright

NOTE: This is a 16-week course.

Course Description:

An instructional program designed to integrate on-campus study with practical hands-on work experience in physical sciences. In conjunction with class seminars, the individual students will set specific goals and objectives in the scientific study of inanimate objects, processes of matter and energy, and associated phenomena. Semester Hours 3 (3 lec)

Prerequisites and/or Corequisites:

Prerequisite and/or Corequisite information here from MCC Course Catalog

Course Notes and Instructor Recommendations:

Insert and course notes or recommendations

Instructor Information:

Instructor Name:	Professor Laura Wright
MCC E-mail:	lwright@mclennan.edu
Office Phone Number:	(254) 299-8419
Office Location:	HP 230
Office Hours:	MW 2-3pm, T 2-3:30pm, Th 11am – 1pm, or by appointment

Instructor Name:	Paulina Z. Sidwell
MCC E-mail:	psidwell@mclennan.edu
Office Phone Number:	(424) 250 6102
Office Location:	Online only, through ZOOM (Meeting ID 424-250-6102)
Office Hours:	Tu/Th 1:30 pm to 4:00 pm
Also by appointment:	http://psidwell.appointy.com

Required Text & Materials:

Various articles such as:

Bai, Yong, and Yingfeng Li. "Determining the Drivers' Acceptance of EFTCD in Highway Work Zones." Accident Analysis and Prevention, vol. 43, no. 3, May 2011, pp. 762–768. EBSCOhost, doi:10.1016/j.aap.2010.10.023.

Daniels, Ginger, et al. "Techniques for Manually Estimating Road User Costs Associated with Construction Projects." Texas Department of Transportation, Texas Department of Transportation, Dec. 1999, 168.44.251.92/pub/txdot-info/cmd/407730.pdf.

Fan, Wei, et al. "Prevention of Backover Fatalities in Highway Work Zones: A Synthesis of Current Practices and Recommendations." International Journal of Transportation Science and Technology, vol. 3, no. 4, Dec. 2014, pp. 311–337. EBSCOhost, doi:10.1260/2046-0430.3.4.311.

Mallela , Jagannath, and Suri Sadasivam. "Work Zone Road User Costs." Federal Highway Administration , FHWA, Dec. 2011, ops.fhwa.dot.gov/wz/resources/publications/fhwahop12005/fhwahop12005.pdf.

Pesti, Geza, et al. "Capacity and Road User Cost Analysis of Selected Freeway Work Zones in Texas." Welcome to ROSA P, Texas Transportation Institute, 1 Sept. 2009, rosap.ntl.bts.gov/view/dot/16772.

Porter, Richard J., and John M. Mason. "Modeling Speed Behavior of Passenger Cars and Trucks in Freeway Construction Work Zones: Implications on Work Zone Design and Traffic Control Decision Processes." Journal of Transportation Engineering, vol. 134, no. 11, Nov. 2008, pp. 450–458. EBSCOhost, doi:10.1061/(ASCE)0733-947X(2008)134:11(450).

"Road User Costs." Texas Department of Transportation, Texas Department of Transportation, 2019, www.txdot.gov/inside-txdot/division/construction/road-user-costs.html.

"Texas Manual on Uniform Traffic Control Devices." Revision 2. (October 2014). http://ftp.dot.state.tx.us/pub/txdot-info/trf/tmutcd/2011-rev-2/revision-2.pdf.

"Work Zone Road User Costs - Concepts and Applications Chapter 2. Work Zone Road User Costs." Work Zone Road User Costs - Concepts and Applications: Chapter 2. Work Zone Road User Costs - FHWA Office of Operations, FHWA, 1 Feb. 2017, ops.fhwa.dot.gov/wz/resources/publications/fhwahop12005/sec2.htm.

Yingfeng Li, and Yong Bai. "Highway Work Zone Risk Factors and Their Impact on Crash Severity." Journal of Transportation Engineering, vol. 135, no. 10, Oct. 2009, pp. 694–701. EBSCOhost, doi:10.1061/(ASCE)TE.1943-5436.0000055.

MCC Bookstore Website: http://www.mclennan.edu/bookstore/

Student Support/Resources:

MCC provides a variety of services to support student success in the classroom and in your academic pursuits to include counseling, tutors, technology help desk, advising, financial aid, etc. A listing of these and the many other services available to our students is available at http://www.mclennan.edu/campus-resource-guide/

College personnel recognize that food, housing, and transportation are essential for student success. If you are having trouble securing these resources, we encourage you to contact a success coach by calling (254) 299-8226. Students can visit the Completion Center Monday-Friday from 8:00 a.m.-5:00 p.m. to meet with a success coach and receive additional resources and support to help reach academic and personal goals. Paulanne's Pantry (MCC's food pantry) is open 12:00 p.m.-1:00 p.m., Monday-Friday, without an appointment. The Completion Center and pantry are located on the Second Floor of the Student Services Center (SSC).

Minimum Technical Skills:

Students should have basic computer skills, knowledge of word processing software, and a basic understanding of how to use search engines and common web browsers.

Backup Plan for Technology:

In the event MCC's technology systems are down, you will be contacted/notified through your MCC student email address. Please note that all assignments and activities will be due on the date specified in the Instructor Plan, unless otherwise noted by the instructor.

*** Click Here for the Minimum System Requirements to Utilize MCC's D2L|Brightspace**
(**www.mclennan.edu/center-for-teaching-and-learning/teaching-commons/requirements**)
Click on the link above for information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system.

Methods of Teaching and Learning:

Study methods and documentation will largely consist of the products you create as a result of your activities. These products may include: research papers, DVD, video or audio tapes, reports, samples of work, product of your artistic activity, records of experiments, performances, journals, public presentations. Discuss documentation methods with your faculty sponsor.

Course Objectives and/or Competencies:

1. Gather and analyze at least 10 different and relevant peer reviewed journals and other articles.
2. Discuss current problems and solutions about construction's effects on traffic with TXDOT.
3. Write a literature review for the information found
4. Develop a hypothetical situation in construction that would affect traffic.
    a. Ex: What if a new apartment complex were built on Lake Shore Drive in front of MCC?
5. By using existing data, determine the major issues that concern traffic.
    a. How badly might traffic get for MCC staff/faculty/students?
    b. How long would it last?
6. Brainstorm a detailed list of potential solutions that may help alleviate traffic.
7. Use existing data and the Road Usage Costs from similar cases and analyze it to compare solutions.
8. Reevaluate any errors or problems that may have occurred.
9. Choose the best solution for the hypothetical situation.
10. Analyze any additional traffic issues after the solution chosen.
11. Combine the data found into a coherent research document.

12. Create a presentation off the findings from the data analysis.
13. Present this information to peers and researchers for better analysis.

Course Outline or Schedule:

Weeks	Before meeting, work on:	Deliverables
Jan 13th-17th	○ Proposal ○ Gathering and analyzing sources ○ Applications	○ Proposal by Jan 15th
Jan 20th-24th	○ First outline ○ Applications ○ Gathering and analyzing sources ○ Literature Review ○ Developing a hypothetical situation	○ Outline ○ Applications ○ 10 Credible Sources
Jan 27th- 31st	○ Developing a hypothetical situation ○ Outline Revisions ○ Annotated Bibliography	○ Hypothetical Situation ○ First Draft Literature Review
Feb 3rd-7th	○ Outline Revisions ○ Annotated Bibliography ○ Literature Review Revisions ○ Identifying the major problems with the decided situation ○ Abstract	○ Identify the Major Problems ○ Outline ○ Annotated Bibliography
Feb 10th-14th	○ Develop solutions to the problems ○ Annotated Bibliography Revisions ○ Abstract ○ Literature Review Revisions	○ Developed solutions ○ Abstract
Feb 17th-21st	○ Annotated Bibliography Revisions ○ Abstract Revisions ○ Literature Review Revisions ○ Research the pros and cons of each solution ○ Review the Road Usage costs	○ Second Draft Literature Review ○ Annotated Bibliography
Feb 24th-28th	○ Abstract Revisions ○ Literature Review Revisions ○ Research the pros and cons of each solution ○ Review the Road Usage costs ○ Begin Research Paper	○ Best Decided Solution ○ Abstract

	○ Begin Presentation	
Mar 2nd-6th	○ Literature Review Revisions ○ Research Paper ○ Presentation	○ Beginning Presentation ○ Final Literature Review ○ Rough Draft Research Paper
Mar 9th-13th	○ Practice Presentation	○ SPRING BREAK
Mar 16th-20th	○ Practice Presentation	○ Great Plains Conference
Mar 23rd-27th	○ Discover any additional issues with the situation and solve	○ List of problems with the situation and potential solutions
March 30th – Apr 3rd	○ Decide the best way to solve the problems with the solution ○ Continue paper and presentation	○ Finalized Solution
Apr 6th –10th	○ Continue paper and presentation	○ Updated Presentation ○ Updated Paper
Apr 13th –17th	○ Revise paper and presentation	○ Finalized Presentation ○ Finalized Paper
Apr 20th –24th	○ Practice Presentation	○ Presentation at Scholar Day

Course Grading Information:

Item	Percentage
Annotated Bibliography	10%
Outlines	10%
Literature Review	15%
Data Analysis	20%
Final Paper	30%
Presentation	15%
Total	**100%**

Annotated Bibliographies:

Submit an annotated bibliography periodically regarding all obtained readings. This should include a thorough summary of the readings as well as an analysis of how the information fits into the overall research.

Category	Grade
APA Format	/20
Thorough Summary	/40

Research Analysis	/40
Total Grade	**/100**

Outlines:

Periodically provide a rough outline of final paper. Outline to include a thesis statement.

Category	**Grade**
Outline of Paper	/50
Thesis Statement	/50
Total Grade	**/100**

Literature Review:

Provide a literature review of relevant literature available on topic. Introduction should identify the topic of concern, the reasons for conducting the literature review, describe the organization, and explain how sources were chosen. The body should group similar sources, make comparisons between sources, and summarize the information. The conclusion should summarize significant sources, identify areas for further research, and show how thesis fits overall into the subject area.

	Descriptions	**Points (_of_)**
Articles	The information is from multiple credible and reliable sources and relevant to the topic	**___ of 17**
Clarity	Is the review organized and does it reach logical conclusions	**___ of 17**
Reference Sheet	Are sources cited properly and in the correct format	**___ of 17**
Length	Is the review a respectable length	**___ of 17**
Format	Font, spacing, formatting, and correct grammar	**___ of 16**
Background and Significance	Is an established topic clearly presented and reported	**___ of 16**
Total:	**___ of 100**	

Presentation:

Present research at GPHC Conference and MCC Scholar Day.

CONTENT	**SCORE**
The student gives all information needed for a viewer to understand	**___ of 10**
All information is presented in a logical order	**___ of 10**
Slides have an appropriate balance of text and images	**___ of 10**
All mechanics are correct such as spelling and grammar	**___ of 10**
DESIGN	
The appearance is appropriate. Colors, fonts, and backgrounds readable and professional.	**___ of 5**
Text is readable to an audience	**___ of 5**

PRESENTATION	
Presenter is familiar with materials and is thoroughly prepared (rarely reads from notes or slides)	**___ of 10**
Delivery is natural and helps builds engagement with audience	**___ of 10**
ANALYSIS/GRAPHS	
Data analysis is presented in a clear, concise manner	**___ of 10**
Graphs and tables are used to aid in the presentation of the analysis	**___ of 10**
Graphs and tables are easy to read and understand	**___ of 10**
Total:	**___ of 100**

Final Paper- 100 points:
This paper should be written in APA format. It should be approximately 12-15 pages in length.

Category	Grade
Content	/35
Clear thesis and research analysis	/25
Organization	/15
Proper APA Format	/15
Grammar/Spelling	/10
Total Grade	**/100**

Late Work, Attendance, and Make-up Work Policies:
The student is expected to adhere to the proposed schedule for independent study. Regular, periodic contact and documentation should be provided to the faculty sponsor as planned. Any schedule modifications must be made in consult with the sponsor.

Student Behavioral Expectations or Conduct Policy:
Students are expected to maintain classroom decorum that includes respect for other students and the instructor, prompt and regular attendance, and an attitude that seeks to take full advantage of this educational opportunity.

*** Click Here for the MCC Academic Integrity Statement**
(www.mclennan.edu/academic-integrity)
The link above will provide you with information about academic integrity, dishonesty, and cheating.

*** Click Here for the MCC Attendance/Absences Policy**
(www.mclennan.edu/highlander-guide/policies)
Click on the link above for the college policies on attendance and absences. Your instructor may have guidelines specific to this course.

Accommodations/ADA Statement

Any student who is a qualified individual with a disability may request reasonable accommodations to assist with providing equal access to educational opportunities. Students should contact the Accommodations Coordinator as soon as possible to provide documentation and make necessary arrangements. Once that process is completed, appropriate verification will be provided to the student and instructor. Please note that instructors are not required to provide classroom accommodations to students until appropriate verification has been provided by the Accommodations Coordinator. Instructors should not provide accommodations unless approved by the Accommodations Coordinator. For additional information, please visit mclennan.edu/disability.

Students with questions or who require assistance with disabilities involving physical, classroom, or testing accommodations should contact:

disabilities@mclennan.edu
254-299-8122
Room 319, Student Services Center

*** Click Here for more information about Title IX**

(**www.mclennan.edu/titleix**)

We care about your safety, and value an environment where students and instructors can successfully teach and learn together. If you or someone you know experiences unwelcomed behavior, we are here to help. Individuals who would like to report an incident of sexual misconduct are encouraged to immediately contact the Title IX Coordinator at titleix@mclennan.edu or by calling Dr. Drew Canham (Vice President for Student Success) at 299-8645. Individuals also may contact the MCC Police Department at 299-8911 or the MCC Student Counseling Center at MCC by calling 299-8210. The MCC Student Counseling Center is a confidential resource for students.

McLennan's Title IX webpage (http://www.mclennan.edu/titleix/) contains more information about definitions, reporting, confidentiality, resources, and what to do if you or someone you know is a victim of sexual misconduct, gender-based violence or the crimes of rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence or domestic violence.

* *You will need to access each link separately through your Web browser (for example: Internet Explorer, Mozilla, Chrome, or Safari) to print each link's information.*