



WACO, TEXAS

**COURSE SYLLABUS
AND
INSTRUCTOR PLAN**

ACADEMIC COOPERATIVE – MARS 101 RESEARCH

PHYS 2389 – SECTION 01

LAURA WRIGHT

APRIL K. ANDREAS

NOTE: This is a 16-week travel course

COVID 19 Notice:

McLennan Community College is committed to providing you with every resource you need to reach your academic goals including your safety. We will continue to monitor the evolving situation with COVID 19 and adjust our safety guidelines to make sure we offer a safe environment for you and our faculty. Please make sure to consult your faculty and the MCC website at <https://www.mclennan.edu/crisis-management/coronavirus-updates/index.html> on any changes to these guidelines.

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Course Description:

An instructional program designed to integrate on-campus study with practical hands-on experience in the physical sciences. In conjunction with class seminars, the individual student will set specific goals and objectives in the study of inanimate objects, processes of matter and energy, and associated phenomena. This particular course is focused on developing a research project that will be deployed at the Mars Desert Research Station in Hanksville, Utah.

Prerequisites and/or Corequisites:

Course requires consent of instructor. Prerequisites and co-requisites determined according to project proposal.

Course Notes and Instructor Recommendations:

In conjunction with faculty, the individual student will set specific goals and objectives in the study of the physical sciences. The student will demonstrate level-appropriate mastery. The student will work with a faculty member or department-approved professional mentor under the supervision of a faculty member. The student will cooperate in planning and devising his or her responsibilities. The student will meet at regular intervals with the supervisor of record.

Instructor Information:

Instructor Name: Dr. April K. Andreas
MCC E-mail: aandreas@mclennan.edu
Contact information: 254-299-8130, Science 221
Office Hours: <https://calendly.com/akandreas>
Department Website: <http://www.mclennan.edu/engr/>

Instructor Name: Professor Laura Wright
MCC Email: lwright@mclennan.edu (preferred method of contact)
Office Phone Number: 254-299-8419
Office Location: S 246 or Zoom Meeting ID: 837-729-4618
Office/Teacher Conference Hours:
2-4pm Mondays & Wednesdays, 3-4pm Thursdays

Required Text & Materials:

Recommended:

- Additional references may be recommended, depending upon the project.

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

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Methods of Teaching and Learning:

Students will learn through independent research, using textbooks and other available resources, along with directed work and discussions with the professors. Additional methods may be used as opportunities present themselves.

Course Objectives and/or Competencies:

The student will explore and analyze topics within physics to meet student-defined goals, objectives, and research interests in coordination with a Physics Department faculty member.

- The student will demonstrate the integration of discipline-specific perspectives with their application in a context outside of the traditional academic classroom.
- The student will demonstrate level-appropriate mastery of applied skills in the designated areas of study.
- The student will develop the ability to work in a faculty-student relationship to set and achieve specific goals in communication, leadership, and/or critical thinking.
- The student and supervising faculty member will define and agree upon plans for communicating and assessing progress and criteria for evaluating the student's work.
- The student will attend a two-week crew rotation at the Mars Desert Research Station (MDRS) at Hanksville, Utah.

Course Outline or Schedule:

Week Of	Objectives	Deliverables Due by Friday Unless indicated otherwise
Mon, Aug 22	Phase 1: Creating a Testing Plan <ul style="list-style-type: none">• Determine what parameters of operation research will focus on (interoperatbility of parts, reliability, maintainability, functionality, etc.)	
Mon, Aug 29	<ul style="list-style-type: none">• Identify any anticipated equipment or software needs	<ul style="list-style-type: none">• Email Dr. A with details on any required purchases
Mon, Sep 5		
Mon, Sep 12		
Mon, Sep 19	<ul style="list-style-type: none">• Begin discussions for ideas for phase 2	<ul style="list-style-type: none">• Determine scope phase 2
Mon, Sep 26		<ul style="list-style-type: none">• Project Report 1 on Thu HW night

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Week Of	Objectives	Deliverables Due by Friday Unless indicated otherwise
Mon, Oct 3	Phase 2: Enact Testing Plan <ul style="list-style-type: none"> Go through the testing process as expected in simulation, increasing the integrity of the simulation over time, including enforcing time delays, working with gloves on EVA, etc. 	
Mon, Oct 10		
Mon, Oct 17		
Mon, Oct 24	Mars Prep <ul style="list-style-type: none"> Determine key elements, develop tables Make an exam / homework catch-up plan with professors 	
Mon, Oct 31		
Mon, Nov 7		<ul style="list-style-type: none"> Project Report 3 on Thu HW night
Mon, Nov 14	<p style="text-align: center;"><i>At Mars!</i> Nov 13 – Nov 26 Flights likely to occur Nov 12 and Nov 27</p>	
Mon, Nov 21		
Mon, Nov 28		

Course Grading Information:

Your grade from the course will come from your faculty advisors. The breakdown is as follows:

Category	Weight
Project Report 1	25%
Project Report 2	25%
Final MDRS Project	50%

Project Report Presentations: These will be graded based on professionalism and quality of material presented. Presentations will take place in front of the instructors and any other MCC students wishing to attend. The project reports will take place during Engineering & Physics Club Homework Night to give other students the opportunity to learn about student-driven

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research. Presentations should be 10-15 minutes in prepared material, followed by a Q&A. Presenters should be dressed professionally and should present in person unless Covid restrictions prevent doing so.

MDRS Project. The final project are whatever deliverables are determined. This grade will be determined based on how well the plan was executed and will depend as well upon feedback by Dr. Shannon Rupert, director of MDRS. In the event that students are not able to attend due to unforeseen circumstances, adjustments will be made to the grading rubric.

Students must have an 80% or higher average grade on the two project reports in order to travel to MDRS.

The Mars Society may have unique requirements for attendance, including the completion of specific paperwork and vaccination records. Students must be able to use transportation methods such as airplanes, trains, or private vehicle and meet any requirements put on using public transportation. Students who are concerned they cannot meet these requirements must address them with the professors immediately so alternate arrangements can be made.

In compliance with Executive ORDER GA 38, McLennan Community College does not require the COVID-19 vaccine for employment or enrollment as a student on our campus. However, this program depends on the partnership and support of the Mars Society to complete the field work. The Mars Society is committed to maintaining a safe environment for all stakeholders. With rapidly rising COVID-19 case counts in our community due to the highly contagious Delta and Omicron variants, the Mars Society now requires the COVID-19 vaccine for all participants, and all airlines require the use of a mask when in the airport or in the airplane.

It is the choice of all students and faculty to take or decline the COVID-19 vaccine. If you wish to apply for a medical or religious exemption from this requirement, please follow the steps in this process carefully. If you choose to remain unvaccinated against COVID-19 and do not have an approved medical or religious exemption, you will not be allowed to attend the rotation at MDRS. This compromises completion of objectives and competencies of the program. Attendance is a vital and mandatory component of this program and there is no option for earning credit for this portion of the course without physical attendance at MDRS.

If you do not submit documentation requesting an exemption by **5 pm on Friday, August 26**, it will be assumed that you will be able to comply with any vaccine and mask requirements. If your exemption is approved, your professors will work with you to earn credit for the course without the travel portion. If your exemption is not approved, or if it not submitted by the

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deadline, then failure to meet any vaccine and mask requirements will result in a 0 for this portion of the grade, with no opportunity to make up the work.

Exemption Process:

1. Fill out the exemption form completely, indicating medical or religious exemption. You can get the form on the Brightspace shell.
2. Include supporting documentation and information as required.
3. Sign and date.
4. Submit your documentation to your professors no later than **5 pm on Wednesday, August 24.**
5. The exemption information will be reviewed by the program director and the Dean of Health Professions. Additional support from the Leadership Team, Human Resources, or Legal Counsel will be utilized as needed.
6. Exemption acceptance or denial will be communicated to the applicant as quickly as possible.

For More Information about COVID-19 Vaccines:

Different COVID-19 Vaccines | CDC: <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines.html>

COVID-19 Vaccines | FDA: <https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines>

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 Attendance/Absences Policy

(<https://www.mclennan.edu/highlander-guide/policies.html>)

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Click on the link above for the college policies on attendance and absences. Your instructor may have additional guidelines specific to this course.



ACADEMIC RESOURCES/POLICIES

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. For additional information, please visit www.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

Title IX:

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 (Chief of Staff for Diversity, Equity & Inclusion/Title IX) at (254) 299-8645. Individuals also may contact the MCC Police Department at 299-8911 or the MCC Student Counseling Center at MCC at (254) 299-8210. The MCC Student Counseling Center is a confidential resource for students. Any student or employee may report sexual harassment anonymously by visiting <http://www.lighthouse-services.com/mclennan/>.

Go to McLennan's Title IX webpage at www.mclennan.edu/titleix/. It 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.

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 or want to explore strategies for balancing life and school, we encourage you to contact a Success Coach by calling (254) 299-8226 or emailing SuccessCoach@mclennan.edu. Students may visit the Completion Center Monday-Friday from 8 a.m.-5 p.m. to schedule a meeting with a Success Coach and receive additional resources and support to help reach academic and personal goals. Paulanne's Pantry (MCC's food pantry) provides free food by appointment to students, faculty and staff based on household size. Text (254) 870-7573 to schedule a pantry appointment. The Completion Center and pantry are located on the Second Floor of the Student Services Center (SSC).

MCC Foundation Emergency Grant Fund:

Unanticipated expenses, such as car repairs, medical bills, housing, or job loss can affect us all. Should an unexpected expense arise, the MCC Foundation has an emergency grant fund that may be able to assist you. Please go to <https://www.mclennan.edu/foundation/scholarships-and-resources/emergencygrant.html> to find out more about the emergency grant. The application can be found at https://www.mclennan.edu/foundation/docs/Emergency_Grant_Application.pdf.

MCC Academic Integrity Statement:

Go to www.mclennan.edu/academic-integrity for information about academic integrity, dishonesty, and cheating.

Minimum System Requirements to Utilize MCC's D2L|Brightspace:

Go to <https://www.mclennan.edu/center-for-teaching-and-learning/Faculty-and-Staff-Commons/requirements.html> for information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system.

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 notified via 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.

Email Policy:

McLennan Community College would like to remind you of the policy (<http://www.mclennan.edu/employees/policy-manual/docs/E-XXXI-B.pdf>) regarding college email. All students, faculty, and staff are encouraged to use their McLennan email addresses when conducting college business.

A student's McLennan email address is the preferred email address that college employees should use for official college information or business. Students are expected to read and, if needed, respond in a timely manner to college emails. For more information about your student email account, go to www.mclennan.edu/student-email.

Instructional Uses of Email:

Faculty members can determine classroom use of email or electronic communications. Faculty should expect and encourage students to check the college email on a regular basis. Faculty should inform students in the course syllabus if another communication method is to be used and of any special or unusual expectations for electronic communications.

If a faculty member prefers not to communicate by email with their students, it should be reflected in the course syllabus and information should be provided for the preferred form of communication.

Email on Mobile Devices:

The College recommends that you set up your mobile device to receive McLennan emails. If you need assistance with set-up, you may email Helpdesk@mclennan.edu for help.

You can find help on the McLennan website about connecting your McLennan email account to your mobile device:

- [Email Setup for iPhones and iPads](https://support.microsoft.com/en-us/office/set-up-an-outlook-account-in-the-ios-mail-app-b2de2161-cc1d-49ef-9ef9-81acd1c8e234?ui=en-us&rs=en-us&ad=us) (<https://support.microsoft.com/en-us/office/set-up-an-outlook-account-in-the-ios-mail-app-b2de2161-cc1d-49ef-9ef9-81acd1c8e234?ui=en-us&rs=en-us&ad=us>)
- [Email Setup for Androids](https://support.microsoft.com/en-us/office/set-up-email-in-android-email-app-71147974-7aca-491b-978a-ab15e360434c?ui=en-us&rs=en-us&ad=us) (<https://support.microsoft.com/en-us/office/set-up-email-in-android-email-app-71147974-7aca-491b-978a-ab15e360434c?ui=en-us&rs=en-us&ad=us>)

Forwarding Emails:

You may forward emails that come to your McLennan address to alternate email addresses; however, the College will not be held responsible for emails forwarded to an alternate address that may be lost or placed in junk or spam filters.

For more helpful information about technology at MCC, go to [MCC's Tech Support Cheat Sheet](#) or email helpdesk@mclennan.edu.

Disclaimer:

The resources and policies listed above are merely for informational purposes and are subject to change without notice or obligation. The College reserves the right to change policies and other requirements in compliance with State and Federal laws. The provisions of this document do not constitute a contract.