

Course Syllabus

Course Number: PHS 1

Course Title: Scientific Concepts

Credits: 3

Faculty Contact Information: Click the [People](#) link at left for your faculty's information.

Course Materials

Scientific Calculator - Please be sure to have a scientific calculator (graphing calculators are also acceptable) to use throughout this course.

Course Textbook:

Please note that if you are ordering your textbook, you should not delay in placing an order for your book - you may need to allow a few business days to receive the textbook (or an access code card for some electronic versions of the text) through the mail.

You may order a hard copy or an electronic version of the course text:

ISBN 13: 978-126015054-4

Title: Physical Science

Author: Bill Tillery

Edition: 13th (12th, 11th or 10th edition may also be used)

Technology Requirements

Hardware

- PC running Windows XP Service Pack 2+, Vista, Windows 7 or 8
OR
- Intel based Mac running OS X 10.6 or later;
- Monitor display resolution of at least 1280x720;

- Broadband connection with bandwidth of at least 768K/384K (downstream/upstream); and
- A microphone, web-cam (at least VGA (640x480) resolution), and speakers/headphones*.

* Hardware must meet the specified requirements of the web-cam. software

- Google Chrome browser version 26 or greater;
- Adobe Acrobat Reader version 10 or greater; and
- Javascript must be enabled in browser.
- Some functionality will require the following additional plugins:
 - Flash for media recording, streaming and viewing, as well as uploading files to a course or assignment; and
 - Java for screen sharing.
 - Microsoft Office recommended (Open tools OpenOffice or LibreOffice are valid substitutes)

Course Description

This class will teach us how to understand the workings of our universe, where Physics and Chemistry play an important role. Students will complete this course with a good general knowledge of Physics and Chemistry. We will couple theory with the real world through many simple demonstrations in class. We will brainstorm and discover for ourselves how the universe works. We will work in small groups on projects and discover the discoverer in ourselves. Visualization of concepts will be provided with interesting video presentations. We will see how physics and chemistry relate to everyday life.

Course Learning Outcomes

Write chemical compounds correctly and name them correctly according to nomenclature rules.

- Derive and balance diverse chemical equations.
- Differentiate between the concept of atoms, molecules, and moles
- Write the atom's electronic configuration.
- Convert from one unit to another in commonly used metric units.
- Solve problems in chemistry and physics with the correct physical units and draw conclusions.

Assessment of Student Learning Outcomes

Student learning is at the core of the MSMU mission. MSMU faculty developed a plan to assess the student-learning outcomes that represent the knowledge, skills and attitudes expected of a college student in your major. In this class one or more student learning outcomes will be assessed. Some of our class assignments may be used to evaluate overall student learning and to improve teaching and learning in this class, this department, and throughout the University.

The following Core Capabilities are included in this course:

- Work Ethic
- Learning to Learn
- Teamwork
- Critical Thinking
- Problem Solving
- Effective Communication

Course Requirements

- Time Requirements. This is a 3-credit-hour course and will require approximately 18 hours of focused effort every week over the 8-week course schedule to be completed successfully. Please schedule time for this course, along with other courses and individual responsibilities you may have accordingly.
- Adaptive & Project-Based. This course uses a combination of individualized, adaptive learning, and project-based learning strategies. As such, you will be expected to actively engage with the content of the course individually and also to collaborate actively with your peers every week.
- Mastery. You are required to demonstrate mastery of the concepts and terms presented within the course. You will demonstrate mastery by completing a series of quizzes and assignments designed to help you improve your proficiency with the terminology, concepts and skills presented in the course content.
- Participation & Engagement. You are expected to fully engage with your classmates, your instructor and the content of the course. Full engagement requires that you log into the online system and communicate meaningfully with your classmates at least five days each week. Doing so will make your

learning experience more effective, more enjoyable, and ultimately, more successful.

- **Discussions and Groups.** A discussion is not a discussion if you only post and reply a couple of times a week, several days apart. Your group can only communicate and function at its best if everyone is present and actively involved. You are expected to take personal responsibility for the success of your discussions and group work. Login, read and post to discussions and group projects at least three to four days per week, depending on the assignment expectations for the week. When the workload becomes more challenging, reach out to your classmates more often.
- **Project.** The projects for this course are to collaboratively design and build and solve problems each week. All of your collaborative work from week to week will be shared with the class publicly and will be evaluated by your peers and by your instructor at the end of the course.
- **Writing expectations.** This is a rigorous, college-level course and you are expected to write at the college level in all of your assignments. Failure to proofread submissions for spelling and grammar will result in a significantly lower grade.

Grading Scale

| | |
|---------------|---------------|
| 93 - 100% = A | 78 - 79% = C+ |
| 90 - 92% = A- | 73 - 77% = C |
| 88 - 89% = B+ | 70 - 72% = C- |
| 83 - 87% = B | 60 - 69% = D |
| 80 - 82% = B- | 50 - 59% = F |

Assignment grading expectations

All assignments are expected to be turned in by midnight of the due dates stated in the syllabus and course calendar. Your instructor will grade and give feedback to assignments within 24 hours of your submission, or the next business day. The exceptions to this timeline are for large group projects, which will be returned within 72 hours.

Schedule of Topics and Assessments

Click [Assignments](#) on the left to see a comprehensive list of points and due dates.

| Week | Topics | Assessments |
|------|------------------------|------------------------------|
| 1-2 | What is Science? | Syllabus Quiz |
| | Motion | Math Pre-test |
| | | Module 1 Discussion |
| | | Module 1: Team Homework |
| | | Introduction to Science Quiz |
| | | Motion Quiz |
| 3 | Energy | Module 2 Discussion |
| | | Module 2: Team Homework |
| | | Energy Quiz |
| 4 | Heat | Module 3 Discussion |
| | Wave Motions and Sound | Module 3: Team Homework |
| | | Heat Quiz |
| | | Module 4 Discussion |
| | | Module 4: Team Homework |
| 5 | Wave Motions and Sound | Wave Motions and Sound Quiz |
| | Atoms and Elements | Physics Exam |
| | | Module 5 Discussion |
| | | Module 5: Team Homework |

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| 6 | Atoms and Elements Chemical Properties and Bonds | Atoms and Elements Quiz Module 6 Discussion Module 6: Team Homework Chemical Properties and Bonds Quiz |
| 7 | Chemical Reactions and Solutions Organic and Nuclear Chemistry | Module 7 Discussion Module 7: Team Homework Chemical Reactions and Solutions Quiz Module 8 Discussion Module 8: Team Homework |
| 8 | Organic and Nuclear Chemistry | Organic Chemistry and Nuclear Reactions Quiz Chemistry Exam Final Exam |

Program and Course Policies

Discussion Forum Guidelines

This course will require significant online interaction with your classmates. Please remember the following guidelines as you post and reply to your classmates.

- Review the discussion threads thoroughly before entering the discussion. Be a reader, then a respondent.
- Try to maintain threads by using the “Reply” button rather than starting a new topic.
- Do not make insulting or inflammatory statements to other members of the discussion group. Be respectful of others ideas.
- Be polite. Choose your words carefully. Do not use derogatory statements.

- Be patient and read the comments of other group members thoroughly before entering your remarks.
- Be positive and constructive in group discussions.
- Respond in a thoughtful and timely manner.

Late or missing assignments

All assignments and exams listed in the syllabus must be submitted in order to earn a passing grade in the course. Assignments and assessments are due according to the course schedule and syllabus. All students are expected to plan their time and energies so that course work can be completed and submitted on time.

If an emergency, medical or personal obstacle prevents you from meeting assignment expectations, you must contact your instructor as early as possible. At your instructor's discretion, assignments may be accepted after the due date, though late penalties may be assessed to your score. Except in extreme cases (as determined by your instructor), an assignment that is more than one week late will be accepted and will receive feedback, but will earn zero points towards your grade.

Due Dates and Times

Remember to check your time zone in the Canvas system. You can do this by clicking settings in the top right corner, then checking it in the center part of the page. All due date times are 11:59 pm in Pacific Time. This means that if you are in a different time zone, the due date may appear to be later, since 11:59 pm PT on Wednesday is 12:59 am Mountain Time on Thursday, 1:59 am Central Time on Thursday, and 2:59 am Eastern Time on Thursday.

You may want to set your time zone in the Canvas system to Pacific Time. Then, you will always see the correct due date, and you do not need to worry about converting time zones.

Policy on Incompletes

An incomplete in a course can be granted only when a student has fulfilled the majority of the course requirements, has a passing grade in course work, is prevented from completing the assigned work for serious medical/personal

reasons, and can, in the opinion of the instructor, complete the work within one eight-week session.

Technical Requirements

Technical requirements are listed in the syllabus. Before you begin this class, please ensure that your computer is up to date with the proper browser, plugins, microphone and video camera so that you can participate fully with your classmates.

University Policies

Attendance and Engagement

Attendance and engagement are important for successful study, especially in an online class environment. Although you may not be required to appear in a classroom each week, you are expected to participate regularly in the online environment, to engage actively with the course content, with your classmates and with your instructor. In fact, early and regular participation in online classes is a significant predictor of student success.

Therefore, measures of student engagement and participation may be taken into account in determining academic grades. Students may be expected to explain to the instructor the reason for any absences from class activities and, in some cases, be asked to provide appropriate documentation. For more details, please see the Attendance policy in the Student Handbook.

Credit Hour Clarification

A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that reasonably approximates not less than:

1. One hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester, or the equivalent amount of work over a different amount of time; or

2. At least an equivalent amount of work as required in paragraph (1) for other academic activities, including independent or directed study, laboratory work, internships, practicum, studio work, and other academic work leading to the award of credit hours.

Academic Integrity

All degree candidates are expected to adhere to the MSMU statements on Academic Integrity (AI) in the MSMU catalog and myMSMU. This includes avoiding plagiarism and constructing your best work on each assignment. Papers and other work including images, should not be copied from the Internet. Infractions may be addressed by the MSMU administration and possibly include an AI Board review.

The academic environment is predicated on truth and integrity. Acts of dishonesty constitute a serious offense to the Mount Community. Please visit the complete academic integrity policy in the Student Handbook. Acts of academic dishonesty include, but are not limited to:

- Cheating
- Failing to hand in original work
- Plagiarism
- Falsification or misrepresentation
- Theft

Academic Freedom

Students and faculty's freedom of speech is constitutionally protected, so they are free to take reasoned exception to the data or views offered in any course of study and to reserve judgment about matters of opinion—and allow the same freedom for others. See the Student Handbook for further discussion.

Academic Grievance

The Academic Grievance Committee shall receive and investigate complaints, excluding those pertaining to a learning disability (see College Disability Grievance Procedure) that have not been resolved on a lower level (Instructor and

Department Chair/Program Director). Students have 14 business days from the posting of grades or dismissal notice to appeal a grade/standing in program. The burden of proof is on the student. A student who believes that the instructor made a clerical error in computing the grade or an egregious error of judgment in evaluating the student's performance has the right to an appeal procedure. For more information on the Academic Grievance Committee's jurisdiction, functions, and resolution process, see the Student Handbook.

Student Services

Mount Saint Mary's University Online offers a full suite of student services to all of our online students. Some of the most commonly needed student services include the following:

- Technology Help desk
- Disability Services
- Library Services
- Counseling Services

Specific information about each of these services can be found in the Student Handbook.

Disability Statement

Mount Saint Mary's University, Los Angeles is committed to ensuring the full participation of all students in its programs. If you have a documented disability (chronic, medical, physical, learning, psychological, or temporary), or think you may have a disability and need a reasonable accommodation to participate in class, complete course requirements, or access the University's programs or services; contact [Disability Services](#) (DS) as soon as possible. To receive an accommodation, you must register with DS. DS works with students confidentially and does not disclose any disability-related information without student consent. DS coordinates and promotes disability accommodations and awareness and works in partnership with faculty and all other student service offices. For further information about services for students with disabilities, contact DS at the Chalon Academic Support Center, H207, (310) 954-4142, or at the Doheny Student Resource Center, Building 3, (213) 477-2690. You can also email for more information at disability@msmu.edu.

Student Support Statement

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Dean of Students Office DeanofStudentLife@msmu.edu for support. Chalon Campus: 310-954-4130 and Doheny Campus: 213-477-2570. Also, please notify the instructor if you are comfortable in doing so.

Zero Tolerance for Harassment, Discrimination and Retaliation

Mount Saint Mary's University does not discriminate in the administration of its admission policies, scholarship and loan programs, educational programs or in its employment opportunity. The University is committed to providing an environment that is free from harassment, discrimination and retaliation on the basis of sex, sexual orientation or preference, gender, gender identity, race, color, religion, national origin, creed, citizenship status, ancestry, age, marital status, pregnancy, childbirth or related medical conditions, medical conditions including genetic characteristics, mental or physical disability, veteran status, or any other characteristic protected by federal, state or local law, ordinance or regulation. Please review the complete zero tolerance policy in the Student Handbook.

Title IX and Confidentiality

Mount Saint Mary's University faculty are considered to be “Responsible Employees” of the University and are committed to supporting our students and upholding gender equity, as outlined by federal civil rights law Title IX. Therefore, if a student discloses to a member of Mount Saint Mary's University faculty, or any non-confidential employee of the University, regarding an incident of gender-based harassment (including sexual assault, stalking, dating violence and domestic violence) or discrimination (including on the basis of gender, gender identity, or sexual orientation), that faculty member/employee is obligated to share such information with Mount Saint Mary's University's Title IX Coordinator. The Title IX coordinator will assist the student in connecting with all possible supportive resources both on and off-campus, and will review the reporting rights and options. To contact the Title IX Office directly for support, or to file a complaint, please email titleix@msmu.edu or call 213-477-2803 and leave a private voicemail. For more information about the supports, resources, and reporting options available at Mount Saint Mary's University, please see the [myMSMU Title IX page](#).

MSMU's Commitment to Diversity, Equity, and Inclusion

Mount Saint Mary's University's commitment to Diversity, Equity and Inclusive Excellence stems from our CSJ heritage, Catholic identity, mission and values. We are committed to diversity in all its possible forms with emphasis on the importance of human rights, equity, fairness, inclusiveness and diversity in the broadest sense including differences in gender, race, ethnicity, generational history, culture, socioeconomic class, religion, sexual orientation, national origin, citizenship status, political perspectives, geographic origin and physical ability. MSMU strives for inclusion and engagement with people from all walks of life and believes that multi-culturalism improves and enriches the learning, living and working environments for everyone at the Mount. See the [Center for DEI's myMSMU page](#) for more information and resources.

All other University policies are subsumed within this syllabus. For a full description of University policies and procedures, please reference myMSMU/ Student Handbook.

The Athenian Promise

A Commitment to Civility

Mount Saint Mary's University is committed to the advancement of learning and service to society. This is best accomplished in an atmosphere of mutual respect and civility, self-restraint, concern for others, and academic integrity. By choosing to join this community, I accept obligation to live by these common values and commit to the following principles.

As a Mount Saint Mary's University Student:

- I will embrace the concept of civil community which does not tolerate violence, theft, bigotry, or harassment of others in any form.
- I will commit myself to the pursuit of knowledge with personal integrity and academic honesty.
- I will respect the sanctity of the learning environment and avoid disruptive and deceitful behavior toward other members of the college community.
- I will support a culture of diversity by respecting the rights of those who differ from me.

- I will contribute to the development of a caring community where compassion for others and freedom of thought and expression are valued.
- I will honor, challenge and contribute to the scholarly heritage left by those who preceded me and work to leave this a better place for those who follow.

By endorsing these common principles, I pledge to contribute to a civil campus environment and resolve to encourage civil behavior in others. This is my promise to Mount Saint Mary's University and its community of scholars.

-Adapted with permission from the University of Pittsburgh's "Pitt Promise"

Disclaimer

The content of this syllabus may be altered to fit the specific needs of an individual student or group of students.