

Syllabus

Course Numbers:	PPT 161
Course Name:	Process Plant Safety II
Semester:	Spring 2020
Credits:	2
Class Meetings:	B036: TR 10:20-11:20 am
Instructor:	Andrew D. Sullivan
Phone:	247-3047
Email:	Andrew.Sullivan3@msubillings.edu
Faculty Website:	http://www.msubillings.edu/cotfaculty/sullivan/
Office:	A061 – Tech Building
Office Hours:	See attached schedule

Required Texts and Material:

There are no required textbooks to purchase. Required materials will be posted on D2L.

Course Description:

Provides the student with detailed instruction in the field of safety and health within the Process industry. In this course, the student will complete an in-depth study in the use of gas detection equipment, the use of the permitting system including lock out/tag out, the use of OSHA logs, the use of advanced safety equipment, and study the importance of industrial hygiene in an industrial setting.

Course Goals and Objectives:

Upon completion of this course, students will be able to:

1. Apply process safety principles to activities and work tasks to produce a safe working environment.
2. Analyze workplace scenarios, recognize hazards, and develop mitigation plans to ensure a safe environment for oneself, other workers, and the community.
3. Describe and discuss safety issues relevant to process plant industries and the operator's role in maintaining a safe workplace. Focus areas include gas detection, work permitting, lockout/tagout (LOTO), industrial hygiene, and hazardous materials.

Misconduct:

Academic or personal misconduct will be managed per the procedures outlined in the [MSU Billings Student Policies & Procedures Handbook](#).

Cheating is taken very seriously in College. Sending a classmate your electronic files is cheating. Copying or allowing someone else to copy answers is cheating.

It is important that we provide a campus conducive to academic development. Repeated disruptive behavior will be documented and result in final grade reductions up to 10% per occurrence depending on severity.

Cell Phones and Electronic Devices:

Electronic devices including phones, computers, and tablets are distracting to the class and not allowed.

Access, Assistance, and Advocacy:

Your success in a positive, supportive, and enjoyable learning environment is my primary objective and the University's. Please let me know if there are barriers that I can help to address. We have one of the strongest support networks of any university to help. A summary of services is listed below. You can work with them directly or involve me as you prefer.

- [Academic Support Center](#). The City College branch is open M-F 9-5. Resources include tutoring and a writing center. Drop-in and by appointment. 247-3022.
- [Disability Support Services \(DSS\)](#). MSU Billings is committed to providing equal access. Please meet with me to discuss ways to ensure your full participation if you anticipate barriers. DSS will help us (247-3029, Tech Building A011).
- [TRIO/Student Support Services](#). Support for low income, first generation, and disabled students enrolled in a 4 year program (or 2+2 at City College). 657-2162
- [Native American Achievement Center](#). Advocacy and assistance for American Indian students. 657-2144
- [Student Health Services](#). Student Health Services provides medical care, mental health counseling, wellness services and education, and violence advocacy and prevention services. Located above the Academic Support Center at City College. Open M:11-2, T:9-12, W:11-2, and Th:1-5. Students can use Health Services even if they waive the student health insurance plan. 657-2153
- [Veterans Services](#). For assistance activating your VA Educational Benefits, getting access to VA assistance for tutors, or even joining the veteran student organization, contact the VA Representative in the Military and Veterans Success Center, Dawn Githens, at 657-2982. For assistance on the posting of your VA Educational benefits please contact Renee Haefer in the Business Services office at 657-1707.
- [Veterans Upward Bound](#). Assistance for veterans from admission to graduation. 657-2075

Safety:

Some hazards can't be eliminated in a process plant or academic setting and must be managed to prevent serious injury. A discussion of hazards and how to mitigate them will be part of lectures, labs, and other activities and will include safety equipment checks, personal protective equipment requirements, and training. Student responsibilities include:

- Be fully engaged so you understand the hazards and are prepared to manage them.
- Be in a suitable physical and mental state to perform safely and determine if you are prepared to engage in an activity.
- Wear all required PPE. Safety glasses are always required in the lab. No open-toe shoes are allowed in the lab.

- Perform safely and professionally. Horseplay gets people hurt.
- Follow all rules and procedures.

Failure to follow safety rules may result in a written warning, a failing grade for the assignment or course, or loss of laboratory / activity privileges to protect other students. MSUB is not responsible for injury resulting from failure to follow rules or procedures.

Academic Issues and Grading:

1. Late work is not accepted. It isn't fair to the rest of the class to make exceptions. It is possible that a due date might be extended for the whole class beforehand with appropriate class discussion.
2. Final lecture grades will be calculated per the following scoring criteria:

Tests (average of 3 evenly split)	60%
Assignments	40%

3. Grade Scale:

Grade	Percentage	GPA	Grade	Percentage	GPA
A	93 - 100	4.0	C	73 - 77	2.0
A-	90 - 93	3.7	C-	70 - 73	1.7
B+	87 - 90	3.3	D+	67 - 70	1.3
B	83 - 87	3.0	D	63 - 67	1.0
B-	80 - 83	2.7	D-	60 - 63	0.7
C+	77 - 80	2.3	F	0 - 60	0.0

Course Outline:

The following plan is a guideline that will be adjusted to meet the needs of the class.

Week	Day	Class	Class Plan / Notes
1	Thu 01/16/20	1	LOTO
2	Tue 01/21/20	2	LOTO
	Thu 01/23/20	3	Hazard Classification
3	Tue 01/28/20	4	Cleaning Equipment
	Thu 01/30/20	5	Cleaning Equipment
4	Tue 02/04/20	6	Gas Detection Equipment
	Thu 02/06/20	7	Gas Detection Equipment
5	Tue 02/11/20	8	Opening Process Equipment
	Thu 02/13/20	9	Test #1
6	Tue 02/18/20	10	Freeze Protection / Mothballing Equipment
	Thu 02/20/20	11	Blinding practices and Isolation Schemes
7	Tue 02/25/20	12	Process Safety Hazard Recognition (API)
	Thu 02/27/20	13	Rules to Live By (API)
8	Tue 03/03/20		Spring Break
	Thu 03/05/20		Spring Break
9	Tue 03/10/20	14	Process job plans

	Thu 03/12/20	15	Process job plans
10	Tue 03/17/20	16	Operating Procedures
	Thu 03/19/20	17	Introduction to PSM
11	Tue 03/24/20	18	Test #2
	Thu 03/26/20	19	Cold Work Permitting
12	Tue 03/31/20	20	Cold Work Permitting
	Thu 04/02/20	21	Hot Work Permitting
13	Tue 04/07/20	22	Hot Work Permitting
	Thu 04/09/20		Spring Mini Break
14	Tue 04/14/20	23	Special Conditions and Situations
	Thu 04/16/20	24	Ventilation Plans
15	Tue 04/21/20	25	Entry Permits
	Thu 04/23/20	26	Entry Permits
16	Tue 04/28/20		Final Exam 10:00-12:00

Andy's Spring 2020 Calendar

	Monday	Tuesday	Wednesday	Thursday	Friday	
8:00-9:00	Office Hours	Office Hours	Office Hours	Office Hours	Office Hours	
9:10-10:10	PPT 175	PPT 175	PPT 175	PPT 175		
10:20-11:20	PPT 120	PPT 161	PPT 120	PPT 161	Lunch	
11:30-12:30	Lunch	Lunch	Lunch	Lunch	PPT 176	
12:40-1:40	CSCI 214	CSCI 214	CSCI 214	CSCI 214		
1:50-2:50	Office Hours	PPT 176	Office Hours	PPT 176	Office Hours	
3:00-4:00						
4:10-5:10		Office Hours				Office Hours