

Syllabus

Course Numbers:	PPT 120-001 (Lecture)
Course Name:	Environmental Awareness
Semester:	Spring 2021
Credits:	Lecture: 2
Class Meetings:	B036: MW 12:40-1:40
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:

- The following text is [freely available from EPA.gov](#) and will be posted to D2L.
 - Operation of Wastewater Treatment Plants: A Field Study Training Program, 2nd Edition, Volume 1, 1980.
- Other required materials will be posted on D2L.

Course Description:

Provides the student with the history behind certain environmental policies, the creation of OSHA, and key environmental issues. Provides learning in treatment processes, wastewater units, vapor recovery systems, cleanup, and an overview of the specialty equipment necessary for an ecologically sound process plant.

Course Goals and Objectives:

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

1. Explain environmental regulations and limits related to local industry and describe the processes utilized to achieve compliance and operate responsibly.
2. Create flow diagrams of treatment processes, explain the operating principles of these processes, and demonstrate how to operate these processes responsibly.
3. Analyze operating data, assess adequacy of operation, and develop response plans to address abnormal operations.
4. Describe the history of environmental policies and current environmental issues.

Academic Issues and Grading:

1. Late work is not accepted.
2. Final lecture grades will be calculated per the following scoring criteria:

Tests (average of 3 evenly split)	80%
Assignments	20%

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	Plan
1	Wed 01/13/21	1	Sour Water Stripping (SWS) - Process Description
2	Mon 01/18/21		Martin Luther King Day NO CLASSES OFFICES CLOSED
	Wed 01/20/21	2	Sour Water Stripping (SWS) - Process Description
3	Mon 01/25/21	3	Sour Water Stripping (SWS) - Operator Responsibilities
	Wed 01/27/21	4	Sour Water Stripping (SWS) - Operator Response
4	Mon 02/01/21	5	Sour Water Stripping (SWS) - Basic Controls
	Wed 02/03/21	6	CH 1-3 Municipal Wastewater Treating - Overview
5	Mon 02/08/21	7	CH 1-3 Municipal Wastewater Treating - Overview
	Wed 02/10/21	8	CH 4 - Racks, Screens, Comminutors and Grit Removal
6	Mon 02/15/21		Presidents' Day NO CLASSES OFFICES CLOSED
	Wed 02/17/21	9	Test #1
7	Mon 02/22/21	10	CH 5 - Sedimentation and Flotation
	Wed 02/24/21	11	CH 5 - Sedimentation and Flotation
8	Mon 03/01/21	12	CH 8 - Activated Sludge
	Wed 03/03/21	13	CH 8 - Activated Sludge
9	Mon 03/08/21	14	CH 9 - Waste Treatment Ponds
	Wed 03/10/21	15	CH 10 - Disinfection and Chlorination / WWTP Game
10	Mon 03/15/21	16	Industrial Wastewater treating
	Wed 03/17/21	17	RCRA - How an Operator Manages Wastes
11	Mon 03/22/21	18	Test #2
	Wed 03/24/21	19	Leak Detection and Repair (LDAR)
12	Mon 03/29/21	20	Flare Systems - Collection
	Wed 03/31/21	21	Flare Systems - Flare Drum Operation and Slop
13	Mon 04/05/21	22	Flare Systems - Recovery and Combustion
	Wed 04/07/21	23	Combustion - minimizing CO2
14	Mon 04/12/21	24	Combustion - CO and NOx control
	Wed 04/14/21	25	Combustion - particulate control
15	Mon 04/19/21		Final Exam 12:00-2:00 pm

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.

Access, Assistance, and Advocacy:

A summary of services to help you succeed in a positive, supportive, and enjoyable learning environment is listed below.

- [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. 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 at 657-2982. For assistance on the posting of your VA Educational benefits please contact the Business Services office at 657-1707.
- [Veterans Upward Bound](#). Assistance for veterans from admission to graduation. 657-2075

Class and Lab Policies:

- We will follow all rules and guidance set by the University.
- Academic or personal misconduct will be managed per the procedures outlined in the [MSU Billings Student Policies & Procedures Handbook](#).
- Phones, computers, and tablets are not allowed in class.
- Food and drinks are not allowed in classrooms or labs.
- Disruptive behaviors will result in final grade reductions up to 10% per occurrence.

Andy Sullivan's Spring 2021 Calendar

	Monday	Tuesday	Wednesday	Thursday	Friday
8:00-9:00	PPT 211	PPT 212	PPT 211		
9:10-10:10	Office Hours		Office Hours		PPT 176
10:20-11:20	PPT 225	Office Hours	PPT 225		
11:30-12:30	Lunch	Lunch	Lunch	Lunch	Lunch
12:40-1:40	PPT 120	PPT 161	PPT 120	PPT 161	PPT 176
1:50-2:50	PPT 175	PPT 175	PPT 175	PPT 175	
3:00-4:00	PPT 212			Office Hours	
4:10-5:10					