

San José State University
College of Social Sciences / Environmental Studies Dept.
EnvS 148: Sustainable Materials Management (SMM)

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Office Hours:	Tues and Thurs 2:45-4:00 and Friday by appt.
Class Days/Time:	Tues and Thurs 1:30 p.m.-2:45 p.m. Field Work: various Fridays 9 a.m.- 4p.m. and various dates for field trips, government meetings, events, and conferences
Classroom:	On/line (in accordance with Covid-19 pandemic protocols)
Prerequisite	Environmental Studies 001; may be waived with instructor consent.
GE/SJSU Studies Category:	This is a “concentration” course within the ES dept. It is not a GE course.
Units	4-unit course (Lecture + Field Component)

COURSE DESCRIPTION

Historically, federal, state, and regional policies and practices have maintained legislation and associated regulations to manage discarded materials as municipal solid waste (MSW). More recently, the field of ‘waste management’ has evolved into Sustainable Materials Management (SMM). According to the US Environmental Protection Agency (<http://www.epa.gov/smm>), “Sustainable materials management is a systemic approach to using and reusing materials more productively over their entire lifecycles. It represents a change in how our society thinks about the use of natural resources and environmental protection.” By looking at a product's entire lifecycle we can find new opportunities to reduce environmental impacts, conserve resources, and reduce costs.” In this course, students will explore current laws, regulations and practices by governments and organizations and learn how a variety of approaches can move us to a more sustainable society.

This course is highly interdisciplinary and focuses on practical understanding of Sustainable Materials Management (SMM). We will consider politics, business, economics, markets and science, environmental knowledge, governmental systems, urban planning, engineering and more. We will study federal, state and local laws and regulations and trending issues; learn the role of government and the interplay between government and business in creating and maintaining markets; opportunities to spur innovation; learn the role of technology and science; in the pursuit of implementing the sustainable use of materials.

Transitioning from a discard-based, government-centric system requires knowledge of data and facts and how to apply them. We will rely primarily on data from government sources, their contractors, industry, and study of a variety of “real world reports.” This information will be provided on a course web site. The course will have guest speakers from industry and government and will include field trips to recycling facilities (probably one day to two or more facilities). We may also attend a professional recycling conference where we’ll meet professionals in this field. .

Course Goals and Learning Objectives

Coursework includes an historical overview of discard management, regulatory approaches to waste diversion and reduction, California and national legislation, material recovery facilities, recycling markets and marketing recyclables, recycling processes. *Course work includes field studies of recycling and waste management facilities.* Evaluation of learning will include two in-class examinations, group work and presentations, papers, field work evaluation, and class participation.

Learning Objective 1: Students should be able to demonstrate an understanding of: a) key legislation, b) policy development, c) program management mechanisms, d) responsibility of local, state, and the federal government, e) the role of markets, and f) emerging private and/or public initiatives.

Learning Objective 2. Students should be able to demonstrate an understanding of the connections between relevant issues, environmental theory, and methods to accomplish efficient resource management through waste reduction, recycling, market development to approach "Zero Waste".

Learning Objective 3. Students should be able to demonstrate an understanding of Sustainable Materials Management, its techniques and future trends as learned through field work and conversations with professionals.

REQUIRED READINGS/BOOKS

Daily course readings are available or linked on the course website. Key course website:

- <https://sjsu.instructure.com> (to access Canvas)

Other web sites: (for course research)

- California Department of Resources, Recovery and Recycling (CalRecycle)
 - <http://www.calrecycle.ca.gov/>
 - <http://www.calrecycle.ca.gov/BevContainer/>
- Californian’s Against Waste
 - www.cawrecycles.org
- California Resource Recovery Association (Summer conference)
 - www.crra.com
- Center for the Development of Recycling (Santa Clara County Recycling Hotline and Website—ES 193 student credit available)
 - www.recyclestuff.org (Information Resource Guide: found in the publications section, very useful to find sources for research)
- Grass Roots Recycling Network

- www.grrn.org
- Northern California Recycling Association (Spring conference)
 - www.ncrarecycles.org
- United States Environmental Protection Agency, Office of Solid Waste
 - <http://www.epa.gov/osw/>

Course Book Club Project, your choice! Choose one (we'll discuss this in class)

- Connet, Paul. 2013. The Zero Waste Solution. Chelsea Green Publishing. White River Junction, Vermont.
- Collin, Robert. 2015. Trash Talk: An Encyclopedia of Garbage and Recycling around the World.
- Goldstein, Julia. 2019. Material Value: More Sustainable, Less Wasteful Manufacturing of Everything from Cell Phones to Cleaning Products.
- Humes, Edward. 2012. Garbology: Our Dirty Love Affair with Trash. Penguin Group. New York.
- Leonard, Annie, 2011. The Story of Stuff: The Impact of Overconsumption on the Planet, Our Communities, and Our Health—And How We Can Make It Better.
- McDonough, William and Braungart, Michael. 2002. Cradle to Cradle: Remaking the Way We Make Things.
- Minter, Adam. 2015. Junkyard Planet: Travels in the Billion-Dollar Trash Trade
- Royte, Elizabeth. 2005. Garbageland: On the Trail of Trash. Little, Brown and Co New York.
- Rathje, William and Murphy, Cullen. 1993. Rubbish, The Archaeology of Garbage. HarperPerennial. New York.
- Stasser, Susan. 1999. Waste and Want: A Social History of Trash. Metropolitan Books, Henry Holt and Co. New York.



Readings/Schedule

Classroom discussions, exams, and reading assignments and due dates are listed on the course website. The course website may be found on Canvas.

CLASSROOM PROTOCOL

Class Format

This course will be taught with virtual site visits, attending professional and/or government meetings, and classroom activities. A seminar format emphasizing the Socratic method where the professor asks students to explain their reasoning in response to questions will be used. *Students are expected attend each class meeting and course events.* We'll have guest speakers, attend a professional conference (hopefully, we'll have scholarships so we can attend at a low, or minimal cost) have field trips to recycling facilities, study and share knowledge gained from studying your choice of books (from 4) and to engage in course lectures. See the course schedule for activities. The professor will attend all field trips and the course will include lectures and an occasional video to clarify topics throughout the course. *The course is designed to engage in active learning with student interaction.* It also provides an opportunity for students to learn and practice "real life" skills such as writing, group dynamics, project development, and interaction with the working professionals. We will extrapolate information from lecture-related literature reviews, interviews, and site visits to judiciously apply critical thinking skills in the analysis of policy. *Quality participation is expected. The application of an inquisitive nature is the key element to a good classroom experience. Please feel welcome to ask questions frequently. Students may not use smart phones at any time during course activities. Use of laptop computers is limited to course activities only.*

Canvas Learning Management System: Expectations

Students are expected to have basic computer skills including proficiency with the operating system of their computer, software used in the course, use and access of the web and SJSU's Canvas web site, a word processing program, and know how to properly attach documents to emails. This course does not teach computer and software skills. All questions regarding Canvas or related SJSU web or computer issues must be directed to the SJSU help desk.

Course Schedule

Classroom discussions, exams, lectures, reading assignments and due dates are listed in modules found on the Canvas website for this course. The schedule is subject to change with fair notice, typically announced in class.

STUDENT RESPONSIBILITIES

Class members *are required* to be engaged with the material. **Be a responsible class member by attending and being prepared for discussion.** The course is carefully constructed to *build knowledge from each meeting and activity. Missing a class causes disruption to this cycle of learning and will affect grades (participation is required).* Come to each class **prepared to engage, discuss, and learn (active learning).** Here's some other advice:

- Please bring a name card to put on your desk until I get to know you.
- **Be prepared to be conversant about the reading material each day (graded).**
- **Be able to attend the required site visits (field trips). (Professor will attend each).**
- **Be able to attend your choice of government program meetings (events will be provided).**
- Actively participate in learning: Ask questions, provide opinions, and respond to questions

asked in class. (Opinions are always ok; you aren't graded on them. You are graded on not knowing or engaging with the discussion info. Support open thought with reasoned thinking).

- Attend each class to pick up class handouts, if any.
- Take good notes. You'll need them for the assignments.
- Take the time to edit your work and write quality assignments.
- Pay attention to details in the schedule including due dates. They may change.
- Read assignment instructions carefully
- Seek clarity by asking questions!
- Start work immediately on assignments once they are received. If you have questions about coursework, please ask at the beginning of class or during office hours.
- Be prepared for guests by reading the assigned material and treat them respectfully.
- Late assignments are not accepted.

Speakers:

Speakers will be invited to discuss the reality behind the “book learning.” We'll meet the experts in class, at recycling facilities, and at conference(s) (maybe you can bring friends or family—ask later). Students should be prepared for the topic and will be required to have questions prepared for our guest speakers. Always be on time!

- Speakers are professionals that take time from their schedule to meet with us—respect their time. Be on time, respectful, courteous, and be prepared with written questions.
- Being unprepared or rude will affect your grade.

Field Work Component

This 4-unit course includes instructor-led site visits to recycling facilities, attending political (professional staff and elected officials), meetings and a recycling conference (Spring Semester). We will split about 30 hours between these activities. Expect to spend an additional 15 hours during the semester preparing reports for these activities.

Field trips will include visits to recycling/reuse facilities and have related assignments to help you understand operational issues, procedures, and regulations. Students will respond with a reflective exercise to discuss their experience and what was learned.

Office Visits

Do not rely on the advice of other students as they are often mistaken (if I had a dollar for every bad piece of advice I've heard!). I'd like to work with your situation and see you successfully through the course and maybe even to graduation. Please drop in for a visit if you'd like some help with an assignment, discuss something from the course, environmental careers or internships. Please do no delay as you may be in a situation that requires meeting a university or course imposed deadline. See, call, email, passenger pigeon, or drop in during office hours using the contact information on the first page.

UNIVERSITY POLICIES

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Refer to the current semester's [Catalog Policies](http://info.sjsu.edu/static/catalog/policies.html) section at <http://info.sjsu.edu/static/catalog/policies.html>. Add/drop deadlines can be found on the current academic year calendars document on the [Academic Calendars webpage](http://www.sjsu.edu/provost/services/academic_calendars/) at http://www.sjsu.edu/provost/services/academic_calendars/. The [Late Drop Policy](http://www.sjsu.edu/aars/policies/latedrops/policy/) is available at <http://www.sjsu.edu/aars/policies/latedrops/policy/>. Students should be aware of the current deadlines and penalties for dropping classes.

Information about the latest changes and news is available at the [Advising Hub](http://www.sjsu.edu/advising/) at <http://www.sjsu.edu/advising/>.

Achieving Success

This is a 4-unit course. Success in this course is based on the expectation that students will spend a minimum of 45 hours per unit of credit over the length of the course. This is normally 3 hours per unit per week with 1 of the hours used for lecture for instruction or preparation/studying or course related activities including but not limited to internships, labs, clinical practica.

Consent for Recording of Class and Public Sharing of Instructor Material Policy (S12-7)

Common courtesy and professional behavior dictate that you notify someone when you are recording him/her. You must obtain the instructor's permission to make audio or video recordings in this class. Such permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material.

Requests for permission of any type of course recording must be made to the instructor by email. Requests are approved only when responded to in writing by the instructor. *Requests must specify the time period including the student name, student ID number, semester, date of request, course name and number, start and end date of the recording or recording period.* One semester is the maximum. In classes where active participation of students or guests may be on the recording, permission of those students or guests should be obtained as well.

Intellectual Property (S12-7)

Course material developed by the instructor is the intellectual property of the instructor and cannot be shared publicly without his/her approval. You may not publicly share or upload instructor generated material for this course such as exam questions, lecture notes, or homework solutions without instructor consent.

Academic Integrity Policy

Your commitment as a student to learning is evidenced by your enrollment at San Jose State University. The [University's Academic Integrity policy S07-2](http://www.sjsu.edu/senate/S07-2.htm), located at <http://www.sjsu.edu/senate/S07-2.htm>, requires you to be honest in all your academic course work. Please familiarize yourself with the information on this website describing the SJSU Academic Integrity Policy. According to SJSU's Academic Integrity Policy, "Plagiarism is the

use of someone else's language, images, data, or ideas without proper attribution. It is a very serious offense in both academic and professional environments. In essence, plagiarism is both theft and lying: you have stolen someone else's ideas, and then lied by implying that they are your own." Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The [Student Conduct and Ethical Development website](http://www.sjsu.edu/studentconduct/) is available at <http://www.sjsu.edu/studentconduct/>.

Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism (presenting the work of another as your own, or the use of another person's ideas without giving proper credit) will result in a failing grade and sanctions by the University. For this class, all assignments are to be completed by the individual student unless otherwise specified. If you would like to include your assignment or any material you have submitted, or plan to submit for another class, please note that SJSU's Academic Integrity Policy S07-2 requires approval of instructors.

I suggest going through the simple plagiarism tutorial, developed by the library staff, found at this link: <http://tutorials.sjlibrary.org/tutorial/plagiarism/selector.htm> .

Disabilities Policy

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. [Presidential Directive 97-03](http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf) at http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf requires that students with disabilities requesting accommodations must register with the [Disability Resource Center](http://www.drc.sjsu.edu/) (DRC) at <http://www.drc.sjsu.edu/> to establish a record of their disability

ASSIGNMENTS AND GRADING POLICY

Assignments, Exams and Extra Credit

All written assignments must be submitted to the course website by the posted due date/time.

Multiple assignments reduce the stress of having to perform well on infrequent, high point value single-style exams or writing assignments. It's also an attempt to grade students with different skill sets fairly. The course has written papers, exams, discussions, presentations and attending events as tools for evaluating student performance. If you are weak in one area, (exams or speaking) hopefully being strong in another will help in determining a fair and reasonable final grade. Specific instructions for the assignments listed in the following table will be available as they are assigned. Expectations for writing include citing primary sources, avoiding plagiarism, meeting basic formatting standards, and following instructions. All papers will be reviewed by TurnItIn.com which will note plagiarism and report it to the instructor. Severe penalties exist for violating University policies.

Rubrics for Written Assignments

All formal writing assignments will be graded according to these standards. They will be assessed for the quality of the content and the clarity of your writing.

Score	~Grade	Content criteria
10	A	Outstanding response with superior supporting examples or evidence; logical analysis, reasoning, and explanation; clear mastery of content; includes relevant principles and details; excellent citation form and use.
9	A- to B+	Good, solid response that uses excellent supporting examples or evidence; excellent reasoning and explanations; good citation form and use.
8-8.5	B	Solid response that meets minimum required by assignment. Reasoning and explanations are very good. .
7.5	C	Response is accurate but cursory, and does not meet the minimum required for completeness; some inaccuracies or reasoning flaws; response is too general, lacks specific evidence; all sources cited but form is incorrect.
3-5	D	Response doesn't effectively address the question; response fails to support assertions with data or examples; major flaws in reasoning; explanations are unclear; displays inadequate understanding of content; lack of citation.
0	F	Response is missing or not submitted, or does not address the question.

Score	~Grade	Writing criteria
10	A	Meets criteria for 4 (below), plus demonstrates superior grammatical correctness and sense of personal style. Effortlessly readable prose.
9	A- to B+	Very effective organization of paragraphs and paper; interesting, varied sentences; good grammar (usage, punctuation, etc.); few spelling mistakes; does not read like a first draft.
8-8.5	B	Reasonably effective organization of paragraphs and paper; serviceable prose; numerous errors of grammar or spelling; reads like a first draft.
7.5	C	Structurally disorganized; paragraphs lack topic sentences or are not developed effectively; awkward sentence structure; poor grammar, spelling.
3-5	D	Similar to 2, but even harder to read.

Due Dates, Late Papers and Make-Up Exam Policies

All assignments are due and must be posted by the deadline to the course website. There is no leniency or acceptance of late papers. Students report procrastination and being overwhelmed as major reasons for poor performance. I encourage you to schedule time for homework and studying for this course, now. Get started on all assignments EARLY to soften the blow if the inevitable happens (and I hope it doesn't). To avoid missing deadlines: a) back up your computer weekly and save the back-up device in a safe place (your computer will crash, get stolen, or will otherwise disappoint you!), b) knowing that bad stuff happens--even to you--be prepared by getting an early start on assignments --time waits for no one (thank you, Rolling Stones).

Course Grading

The course grade is determined from 100 possible points and some extra credit. Points accumulated during the semester within the grade scale, below, determine the semester grade. Grades are performance-based with one exception, a grade *may* be moved up by one-third of a grade (e.g. C+ to a B-) if a student has turned all assignments, showed improvement throughout the course, attended regularly and has participated.

98 - 100	A+	81 - 86	B	68 - 69	C-	54 and less	F
91 - 97	A	79 - 80	B-	66 - 67	D+		
89 - 90	A-	77 - 78	C +	58 - 65	D		
87 - 88	B+	70 - 76	C	55 - 57	D-		

ASSIGNMENTS LIST

↓ Record your scores here

Points	Points	<u>NOTE: SEE SEPARATE HANDOUTS FOR SPECIFIC INSTRUCTIONS.</u>
	5	<u>Participation: Course Seminars</u> Students are expected to contribute to seminar discussions. This includes asking questions of the professor and the guest lectures.
	20	<u>1a. Reflections Exercise</u> Provide your thoughts on 10 course lectures by the professor or guest lecturer. (2 pts/lecture)
	5	<u>2a. "Garbage and Recycling Book Club" Pre-Report</u> Read and assess an assigned book on recycling or garbage and report on key points. About 4-6 "book clubs" will be assigned. Follow instructions provided on a separate sheet on course website. Book suggestions are in this syllabus. Complete the Pre-Report (questions provided by the Prof) and the final report.
	5	<u>2b. "Garbage and Recycling Book Club" Final Report</u> Complete the questions provided by the Prof in a final report. Instructions on website.
	5	<u>2c. "Garbage and Recycling Book Club:" Presentation/discussion.</u> Meet and exchange research with your Book Club, and then have your Club share info with others in the course.
	5	<u>2d. Book club members grading of each other.</u> Students are expected to actively participate in their book clubs. Students will grade each other for this component.
	16	<u>Field Trips and Field Work: Mandatory Attendance:</u> On various days throughout the course, students are required to attend field trips listed on the schedule. Field trips are essential components of the course (seeing is believing!). Field work will include observation and reporting of practices, attending conference(s), and attending one or more (TBD) meetings such as the Recycling and Waste Reduction Commission, the Technical Advisory Committee (TAC of the RWRC), or a TAC subcommittee (Source Reduction, Budget, Public Education, Household Hazardous Waste), or the Implementation Committee (IC). Dates will be announced in class and/or posted to the course website. Be advised that dates and times vary.
	20	<u>Research Paper and Presentation:</u> Let's learn from each other. Students will prepare a brief paper on a recycling issue and make a 5-minute presentation of it to the class.
	19	<u>Final Exam:</u> The final exam will cover topics presented throughout the course. Prior to the exam, we'll spend a class period discussing materials essential to the course.
	5-10	Extra Credit: Extra credit will be awarded for exceeding the field trip and/or meeting/conference attendance requirements. Points may be included with the final exam. <i>Extra credit may also be earned by conducting an instructor pre-approved interview of a recycling professional.</i>
	110	Total (includes extra credit)