Multidisciplinary Project: VIP Program
Long Island Waste Management Spring 2021
FTF CS 1310 (max 6 students)
synchronous on-line by Zoom
M 2:40-3:25
Available asynchronously through BlackBoard
College of Engineering & Applied Sciences
Stony Brook University
Syllabus

Instructor(s):	David Tonjes	Elizabeth Hewitt
	(old) Comp Sci 1427	(old) Comp Sci 1411
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Office hours:	in person, M 4-5:30, Tu 11:30-1	
	on campus M 10-9, T 9-5, Th 10-4	

Technology Requirements:
Participating in Zoom classes is possible on your phone but better with a computer with a good hard-wired or WiFi connection.

Course Description: Students participate in a multi-term, multidisciplinary project, working with team members ranging from sophomores through seniors and graduate students. Projects are advised by one or more faculty on topics of research, design, innovation and entrepreneurship. While a project is framed within a faculty member's area of expertise, contributions are needed from a diverse array of disciplines. VIP 295 is intended for introductory team members, VIP 395/396 is intended for intermediate team members or students who have working knowledge of the project topic, and VIP 495/496 is intended for advanced team members with two or more semesters of experience on the same project. VIP 595/596 is intended for master's students who can take a leadership role in a project subtask. VIP 695 is intended for doctoral students whose dissertation research is directly related to a project led by his or her faculty advisor Students are expected to maintain involvement with the same project team for multiple terms.

About VIP: The Vertically-Integrated Projects (VIP) Program builds teams of students and faculty who work together on issues of real significance for our technology-driven society. Project topics are defined by faculty in their areas of expertise. They contribute to research programs, educational innovations, industry partnerships, or student design and entrepreneurship activities. Students that join VIP teams earn academic credit for their participation and documented contributions to the team effort. See https://www.stonybrook.edu/vipp for more information.

The teams are:
- Multidisciplinary - drawing students from all disciplines on campus;
- Vertically-integrated - maintaining a mix of sophomores through PhD students each semester;
- Long-term - each undergraduate student may participate in a project for up to three years and each graduate student may participate for the duration of their graduate career.

The continuity, technical depth, and disciplinary breadth of these teams are intended to:

- Provide the time and context necessary for students to learn and practice many different professional skills, make substantial contributions to the project, and experience many different roles on a large, multidisciplinary team.
- Support long-term interaction between the graduate and undergraduate students on the team. Graduate students mentor the undergraduates as they work on projects embedded in the graduate students' research or field of employment.
- Enable the completion of large-scale projects that are of significant benefit to faculty members' research programs, educational innovations, industry partnerships, or design teams.

For Long Island Waste Management VIPP:

Goals: The goals of the course have become two-fold. One is to describe Long Island waste management in terms of its municipal programs. This is being accomplished through web searches and reviews of existing reports. Secondly, we are looking at campus recycling operations. This study is intended to have a field component and a social aspect. The field component will probably involve sampling sets of waste and recyclables, primarily in dorm settings. The social aspect will require finding ways to improve student participation in recycling. Research methods to date have been restricted to studies done by others and some initial investigations of how campus practices support or hinder explorations of waste management by students.

Issues:
1) who manages wastes on Long Island and how are the wastes collected for management?
2) what are the characteristics of LI recycling programs (what is collected, how are the materials managed)?
3) what do we recycle on campus?
4) how do we manage campus recyclables?
5) how well do students participate in recycling?
6) how can student participation be best measured?
7) how can we improve student recycling?
8) what are student attitudes and awareness about recycling?

Methods & Technologies: web searches; interviews; site visits; library research; waste sorts; surveys; experiments involving information presentations and representations.

Disciplines: Applied Mathematics and Statistics; Chemistry; Civil Engineering; Economics; Ecosystems and Human Impact; Engineering Science; Environmental Design, Policy, and Planning; Environmental Humanities; Environmental Studies; Geology; Journalism; Political Science; Sustainability Studies; Technological Systems Management; Chemical and Molecular Engineering; Ecology & Evolution; Environmental Management; Geosciences; Technology and Society; Marine and Atmospheric Sciences

Interests / Preparation by Major: We seek curious and engaged students who will need to understand how difficult it can be to count and assess accurately and who are willing to try to understand how decision-making about waste issues is a multi-discipline matter constrained by realities of economics, politics, international affairs, and even the COVID pandemic. Students should bring some academic skills to the group and be willing to expand and increase their areas of interest and expertise.

Learning Objectives:
  VIP 295 & 395/396**:**
    1. Learn to function as a contributing member of a multidisciplinary team.
    2. Build self-efficacy and motivation for academic success by applying knowledge obtained in earlier coursework to an open-ended project.
    3. Learn the value of refection and self-assessment in reaching personal and team goals.
    4. Obtain skills necessary for independent research and life-long learning.
    5. Learn to document and communicate contributions toward a team effort.
  VIP 495/496 & 595/596:
    1. Build skills for mentoring new team members to become productive contributors.
    2. Understand and accept the role of a senior team member to promote an inclusive work environment for members with diverse backgrounds, expertise, and experiences.
    3. Establish an ability to manage the efforts, prioritize goals and set deadlines for a group task
    4. Learn to lead and accept accountability for the progress of a group task.
    5. Learn to organize, document, and communicate the progress of a team effort.
  VIP 695:
    1. Build skills for research project management and mentoring.
    2. Understand and accept the role of a project manager to promote an inclusive work environment for members with diverse backgrounds, expertise, and experiences.
Build skills for documenting and reporting the progress of a large team effort. **Grading:** The premise of VIP is teams working on projects. Much like a real-world team, individual members work on different aspects of the project. The number of credits for which a student is enrolled is factored into grading.

The term grade is based on three areas. Although each student contributes in different ways, achievement must be demonstrated in all three:
1. **Documentation and records (33%)**
   - VIP Notebook (on-line this semester)

2. **Personal accomplishments and contributions to the team's goals (33%**)
   - Contributions to the team: technical progress, pursuit and sharing of knowledge, and task planning and execution.
   - Expectations for advanced members include leadership, mentorship, and delegation of tasks.
   - Contributions to the Long Island reporting effort

3. **Teamwork and interaction (33%**)
   - Peer Evaluations
   - Meeting attendance and involvement
   - Communication and inclusiveness,
   - Contributes useful ideas and recognizes other's ideas
   - Team reports and presentations.
   - Involves and assists others in effort
   - Leadership/Cooperation

As part of the assessment of the above, each student is required to:

1. Maintain a VIP notebook. **Each student must understand that if work is not documented in the VIP notebook, then "you didn't do it"** (i.e. work that is not documented will not count).
2. Complete the two peer evaluations. **Failure to complete a peer evaluation will result in a full letter grade deduction. Late submissions are not accepted.**
3. Be proactive and self-motivated. The nature of individual tasks on any team requires members to be proactive and self-motivated for the project to succeed.

VIP Notebook Requirements:
see the attached VIP Notebook Grading Rubric as a rough guide; we will not follow it entirely

We will have two sets of Google Folders.
One will be shared among the individual students and the professors. The other will be a team-shared folder. Your notebook will be in the individually-shared folder. Your to-do list and technical notes will be in the shared folder.

Notebooks (individually shared):
The notebook should be kept as an ongoing Google Docs document in the folder shared among the instructors and you. The file should be named with your name, your section and the semester (e.g. Tonjes_295_Fall_2020).

The first entry should include your name, your project's name, your contact info and your team members' names & contact info.

Each entry should begin with a page break and be dated.

Use red-line editing for any changes to earlier entries.

Keep notes from class and other meetings (including on-line interactions with other team members).

"Reflections" are an important element in your notebook. Please try to document your changing thoughts and attitudes about the course.

Team Folder:
To-Do List Requirements:
Maintain a separate file in the "To Do List" subfolder (labeled with your name, e.g., Tonjes_To_Do_List_Fall_2021).

Keep a list of items to be accomplished (include sub-tasks). Use red-line editing to check items off when completed. Date their completion.

Technical/Research Notes:
You can keep a separate set of notes (in the technical subfolder) regarding plans and experimental designs (e.g., Tonjes_Tech_Notes_Fall-2021) and any reading assignments. Store interesting electronic files, links to you-Tube videos, etc. in this folder to share with others.

VIP Notebook Grading Rubric

	Student Name	VIP Team	Semester

VIP Notebook Grading Rubic		Does not meet expectations	Meets expectations	Exceeds expectations
General Maintenance (10)	Proper format	⓪ ①	② ③	④ ⑤
	Regularly Updated	⓪①②③	④⑤⑥⑦	⑧⑨⑩
To-do lists (5)	Utilization and Regular Maintenance	⓪ ①	② ③	④ ⑤
Meeting Notes (15)	Detail and Organization	⓪①②③④⑤	⑥⑦⑧⑨⑩	⑪⑫⑬⑭⑮
Technical/ Research Notes	Completed tasks documented in detail	⓪①②③④⑤	⑥⑦⑧⑨⑩	⑪⑫⑬⑭⑮
	References and resources fully cited	⓪ ①	② ③	④ ⑤
	Team efforts credited and clearly distinguished from individual contributions.	⓪①②③	④⑤⑥⑦	⑧⑨⑩
Reflections	Periodic reflections on directions, progress, and outcomes of decisions	⓪①②③	④⑤⑥⑦	⑧⑨⑩
Usability	Neatness	⓪ ①	② ③	④ ⑤
	Organized, Easy to follow	⓪ ①	② ③	④ ⑤
	Usefulness as a team resource	⓪①②③④⑤	⑥⑦⑧⑨⑩	⑪⑫⑬⑭⑮

Total out of 100:

Comments:

Schedule:

Date	Municipal reports	Campus Recycling				Other
		Website	Posters-outreach	Experiments-Surveys	3-D Printing	
	Lead: Chris Rooney	**Lead:** Heather Waszmer	**Lead:** Nikita Chatoredussy	**Lead:** Declan Graham	**Lead: ??**	
2/8	Intro-Organization					
2/15	X		X			2/17: Wed class 8-9pm
2/22	Dr. Hewitt: Motivating Change					
3/1		X		X		3/3: Wed class 8-9 pm
3/8			X		X	
3/15	**"Spring Break"**					Notebooks due; file assessments
3/22	X		X			3/24 Wed class 8-9 pm
3/29		X		X		
4/5			X		X	4/7 Wed class 8-9 pm
4/19	**TBD**					
4/26						4/21 Wed class 8-9 pm
5/3						Notebooks due; file assessments

Academic Honesty: The main principle in VIP academic honesty is that you will not present someone else's work as your own. Tests and specific assignments (homework, lab assignments, etc.) must be your own work. For other work you are encouraged to consult whatever sources are helpful in learning and understanding the issues associated with the material, but you should always provide appropriate references and citations where such material is included in your VIP notebook, programming code, presentations, etc. To provide a good working environment for all students, you're expected to adhere to rules given here, posted, or disseminated in class. Academic Honesty is taken seriously and failure to follow these principles will result in disciplinary actions as stated in the statement below.

Academic Integrity Statement: Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty is required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website at http://www.stonybrook.edu/commcms/academic_integrity/index.html

Student Accessibility Support Center Statement: If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Student Accessibility Support Center, ECC (Educational Communications Center) Building, Room 128, (631)632-6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential.

Critical Incident Management: Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of University Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.