

**MOLLOY UNIVERSITY
GRADUATE EDUCATION**

Edu 5900.18 - TGI: Teaching Sustainability in the Middle School Classroom:
Keeping it Green Without Gasoline!

- July 8th - 11th
- Asynchronous Online
- 8:00 a.m. - 4:00 p.m.

Instructor:

Paul Zaratini

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Course Description:

Solar panels, electric vehicles and wind farms off the coast of Long Island! Throughout the duration of this course, teachers will create and implement virtual laboratory based and internet based learning activities while focusing on the economic, social and environmental impacts that create sustainability. Participants will engage in assignments, activities and discussions in order to explore sustainability concepts. These activities will guide students to a better understanding of sustainability and the role they play in the big picture. The final project for all participants will be to create a sustainability lesson plan that can be shared with the class. Virtual online field trips and outdoor data collection investigations will be conducted during this course. Although this course focuses on middle school concepts, all grade level teachers are invited as many of the lessons can be adapted for ages K-12. Activities cover NGSS: ESS3-2 Earth and Human activity.

Course Learning Objectives:

1. Green space creation and assessment.
2. Compare relationships between humans and ecosystems.
3. Interpret and analyze wind farm yields.
4. Implementation of green energy production.
5. Maximizing green energy space on Long Island.
6. Identify human impact on Long Island
7. Create an activity or lesson plan including concepts from this course.

Course Grading:

Discussion # 1	Introduction (5pts)
Module # 1	Solar power! (10pts)
Module # 2	Hydrothermal on Long Island? (10pts)
Module # 3	Wind power and our waters(10pts)
Discussion # 2	Wind power and the environment (5pts)
Module # 4	Clean up up the fossil fuel burn (10pts)
Module # 5	Mass transit equations! (10pts)
Module # 6	Biomass versus Biofuels (10pts)
Module # 7	Is the Electric Vehicle worth it?(10pts)
Module # 8	Create a lab activity including concepts from this course. (20pts)