



# Design of Sustainable Polymer Systems (10.496/1.096)

January 6 to January 24, 2025 in Manaus, Brazil  
Professors Bradley Olsen (MIT ChemE) and Desiree Plata (MIT CEE)  
Rosabelli Coelho (MISTI-Brazil and Amazonia managing director)

Design of Sustainable Polymer Systems *in the Amazon* is a capstone design experience for seniors and juniors in ChemE, CEE, and related science and engineering majors at MIT who wish to get hands-on with engineering design to address key challenges in materials sustainability within one of the world's most important ecosystems for global climate change and sustainability. The entire class will be taught in the middle of the rainforest in Manaus, Brazil. Students will study the fundamentals of all aspects of the life cycle of polymer materials including production, manufacturing, use, and disposal, and they will consider ethical, social, and economic aspects of how these systems operate. Students will then apply this knowledge working in partnership with classmates from the Amazon to address a design challenge relevant to local communities. As a part of this immersive experience, students will not only advance their technical abilities but will come to appreciate the deep socioeconomic contexts in which their designs operate and will develop strong skills at international collaboration. No foreign language skills are required, but an application is due to limited space in the class. Preference is given to juniors and seniors.



*I genuinely learned a lot from this class and has deepened my knowledge about ways in which we can create more sustainable futures. –MIT student*

**Info Sessions: Tuesday September 3 and Thursday September 5  
at 2 pm, both in 66-360**

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