

Sustainable Materials and Technology (SM&T) Minor

The Sustainable Materials and Technology (SM&T) minor offers all FIT students the opportunity to gain an understanding to evaluate the different types of challenges faced by our societies through fundamental scientific knowledge and practice applying this to real-world scenarios and problems. The SM&T minor will complement students' major-course knowledge and prepare them to lead their industries to a more sustainable future.

This minor includes an engaging set of courses tackling issues touching on the three pillars of sustainability, social, economic, and environmental, and the tools needed to bridge these to build truly sustainable solutions. The foundation of scientific and technical information, tools, materials understanding, and critical thinking helps students see themselves as an active part of the changes needed to make an impact locally and globally. Students will be exposed to new technologies and materials that are currently available or being researched to mitigate the challenges faced world-wide, and offered opportunities to participate in impactful projects.

The following requirements below are intended for students beginning fall 2025.

To declare your minor, please speak to your academic advisor for assistance.

Minor Coordinator:

Karen Pearson

karen_pearson@fitnyc.edu

Required:

SC 102	Climate Change	3
SC 202	The True Cost: A Product's Life Cycle and the Science of Sustainability	3

Electives:

CS 100	Societal Impact of Computing, Security, and Ethics	3
EC 302	Economics of Energy and Fossil Fuels	3
PY 336	Psychology for Sustainability	3
SC 100	Wired	3
SC 101	Biodesign: Innovation at the Intersection of Science and Design	3
SC 103	Environmental Justice Through the Lens of Chemistry	3

SC 109	Pick Your Poison: Introduction to Materials Toxicology	3
SC 201	Plants, Pollinators, and People	3
SC 203	Disease Ecology in a Changing World	3
SC/TD 204	Designing with Emerging Materials (Interdisciplinary)	3
SC 206	The Chemistry and Art of Natural Dyes	3
SC 245	Chemistry of the Everyday World	3
SC 253	Ecology and Environmental Problems	3
HA 319	Art History and Conservation	3
ID 472	Ecology and the Built Environment	2
TT 247	Color Creation and Sustainable Applications	3

Upon completion of the Sustainable Materials and Technology (SM&T) minor, students will understand:

1. Sustainability Science, Product Life Cycle Assessment (LCA), and related calculations on the impact of production, use, and disposal of materials
2. The key components of Climate Change (cause and consequences)
3. The pillars of sustainability, including environmental, social, ethical, and economic factors
4. The atomic nature of the living, matter and Earth
5. Foundations of environmental science or ecology and how humans interact with the Earth and its environments