PAPER ENGINEERING MINOR

Coordinator: Dr. Gary Scott

The paper and related industries (including pulp, mineral, chemical and machinery suppliers) continually seek knowledgeable and skilled employees. Each year, companies hire numerous graduates of chemical, mechanical and environmental engineering programs as well as chemists and other environmental professionals in addition to paper science and engineering graduates. Salaries for new hires are among the highest for all fields of study at the bachelor's degree level. This minor gives students a basic understanding of the paper industry that will allow them to apply their major field of study to this growth industry.

The paper science minor is available to all ESF and Syracuse University undergraduate students (**except students in paper engineering programs**) who maintain a minimum cumulative grade point average of 2.70. Waivers to prerequisites of courses will be favorably considered in increase access to the minor across campus. Fifteen credit hours in paper science courses are required.

Code	Title	Credits
Required Courses		
	PSE 200: Introduction to Papermaking	
	PSE 202: Pulp and Paper Laboratory Skills	
Elective Courses		**11**
	ECH 202: Principles of Mass and Energy Balance	
	PSE 201: The Art of Early History of Papermaking	
	PSE 223: Introduction to Lignocellulosics	
	PSE 304: Professional Internship	
	PSE 305: Professional Co-Op	
	PSE 306: Professional Synthesis	
	PSE 350: Fiber Processing	
	PSE 436: Pulp and Paper Unit Operations	
	PSE 437: Equipment Troubleshooting and Maintenance	
	PSE 438: Biorenewable fibrous and nonfibrous products	
	PSE 450: Pulping and Bleaching Processes	
	PSE 456: Management in Industry	
	PSE 462: Papermaking Processes I	
	PSE 465: Fiber and Paper Properties	
	PSE 466: Paper Coating and Converting	
	PSE 467: Papermaking Wet End Chemistry	
	PSE 469: Functional and Nano Additives	
	PSE 478: Papermaking Processes II	
	PSE 481: Engineering Design	
	PSE 552: Fiber Materials Recycling and Processing	
	RMS 200: Renewable Materials and Composites from Lignocellulosics	
	RMS 335: Transport Properties of Materials	
	RMS 388: Wood and Fiber Identification Laboratory	
	RMS 465: Renewable Materials and Surfaces: Testing	