PTC Faculty Members

Name	E-mail Address	Office #
Perla Balbuena	Balbuena@tamu.edu	979-845-3375
Dave Bergbreiter	bergbreiter@tamu.edu	979-845-3437
Michael Bevan	mabevan@tamu.edu	979-847-8766
Tahir Cagin	cagin@che.tamu.edu	979-862-1449
Elena Castell-Perez	ecastell@tamu.edu	979-862-7645
Abraham Clearfield	a-clearfield@tamu.edu	979-845-2936
Terry Creasy	tcreasy@tamu.edu	979-458-0118
Jaime Grunlan	jgrunland@tamu.edu	979-845-3027
Melissa A. Grunlan	mgrunlan@tamu.edu	979-845-2406
Wayne Hung	hung@tamu.edu	979-845-4989
Helen Liang	hliang@tamu.edu	979-862-2623
Ed Marotta	emarotta@tamu.edu	979-458-3580
Roger Morgan	roger-j-morgan@tamu.edu	979-845-1292
Anastasia Muliana	amuliana@tamu.edu	979-458-3579
Ozden Ochoa	oochoa@tamu.edu	979-845-2022
Zoubeida Ounaies	zounaies@tamu.edu	979-458-1330
K.R. Rajagopal	krajagopal@tamu.edu	979-862-4552
J.N. Reddy	jnreddy@tamu.edu	979-862-2417
Cris Schwartz	cschwartz@tamu.edu	979-845-9591
Dan Shantz	shantz@tamu.edu	979-845-3492
Erik Simanek	simanek@tamu.edu	979-845-4242
Hung-Jue Sue	hjsue@tamu.edu	979-845-5024
Steve Suh	ssuh@tamu.edu	979-845-1417
Jyhwen Wang	jwang@tamu.edu	979-845-4903
John Whitcomb	whit@aero.tamu.edu	979-845-4006

Polymer Technology Center
Texas A&M University
College Station, TX 77843-3123

Director
Hung-Jue Sue
215 Engineering/Physics Building
Phone: (979) 845-5024
Email: hjsue@tamu.edu

Program Coordinator
Isabel Cantu
208 Engineering/Physics Building
Phone: (979) 458-0918
Fax: (979) 845-3081
Email: icantu@tamu.edu

Undergraduate Polymer Specialty Certificate

http://essap.tamu.edu/polymer.htm

POLYMER TECHNOLOGY CENTER

Undergraduate Polymer Specialty Certificate Program

Texas A&M University
http://ptc.tamu.edu

Undergraduate Polymer Specialty Certificate Program

Given the huge importance of the Polymer Industry in Texas a very important goal of the Texas A&M University is to educate and train workforce in the State of Texas to provide necessary knowledge regarding polymer structure-property relationship, catalysis, polymer chemistry, mechanical properties, barrier properties, processing, and modeling.

Many of the engineers graduating from Texas A&M University will find themselves working with polymers in one form or another. Companies specializing in polymer synthesis and manufacturing (e.g., Dow Chemical, ExxonMobil, BASF, Solvay, etc.) strongly desire engineers with a strong polymer background. The proposed polymer certificate program will provide this knowledge, which will reduce training time required to turn Texas A&M students into productive members of the industrial workforce. This emphasis in polymers will give our students a significant edge over those from other universities who have no documented polymer knowledge. TAMU students will be able to fill jobs in Texas that often go to students from out of state schools with established polymer curricula (e.g., Univ. of Southern Mississippi, University of Akron, Univ. of Mass., etc.). Ultimately this certificate program will serve to keep native Texans in Texas by better preparing them for the State's job market.

The objective of this certificate is to provide an interdisciplinary educational program for undergraduate students interested in pursuing a polymer career. Polymer students at TAMU benefit from the distinguished research, education, and industrial outreach that comprise the PTC. Students will be able to structure an individualized program from a selection of courses to meet their career objectives.

Who and What the Program is Designed For

The Undergraduate Polymer Specialty Certificate is intended to address the interests of industry in educating BS graduates with an interdisciplinary understanding of the importance of polymer to any engineering and science applications. The elective courses for the certificate program have been selected with the following criteria in mind:

1. Senior level courses
2. Minimal course prerequisites to allow the majority of engineering or science disciplines to take the course

Commitment to develop engineered sustainable principles into the course materials over time, the Polymer Specialty Certificate Program would be accessible to most engineers and many science majors, particularly Chemistry, Chemical, Aerospace and Mechanical Engineering majors with sufficient science exposure. The ability to offer the certificate to non-engineering majors helps to increase the number of graduates with substantial exposure to polymer thinking.

Benefits

The value of the certificate to the student will be to broaden his or her exposure to a diverse polymer science and engineering curriculum and thereby differentiate the student from peer institutions.

Industry will value graduates with the Polymer Specialty Certificate because they will have a more diverse background in polymers. Further, the graduates will have a focus that would foster entrepreneurial thinking and expand the employment horizons beyond the traditional industrial jobs.

Core Curriculum - choose two of the following 3 courses (6 semester credit hours)

Course Code	Course Title	Credit Hours
MEEN 458	Processing & Characterization of Polymers	3
CHEM 466	Polymer Chemistry	3
CHEN 451	Intro to Polymer Engineering	3

Elective Curriculum – 6 or more semester credit hours from the polymer courses listed below. Up to 3 hours of coursework can be substituted with research emphasizing polymers.

Course Code	Course Title	Credit Hours
MEEN 455	Engineering with Plastics	3
MEEN 471	Elements of Composite Materials	3
AERO 406	Polymer Nanocomposites and their applications	3
MEEN 451	Viscoelastic Solids	3
MEEN/CHEN/ AERO/CHEM 485	Individual Research	3
BMEN 482 & 682	Polymeric Biomaterials	3
CHEN 642	Colloidal & Interfacial	3

You can earn an Undergraduate Polymer Specialty Certificate by completing 12 semester credit hours with a grade of C or above.

To apply for the Undergraduate Polymer Specialty Certificate visit:

http://essap.tamu.edu/polymer.htm