

Cal Poly State University, San Luis Obispo

Fire Protection Engineering-College of Engineering

Why is this program necessary?

- FPE's critical to complex building designs and other specialized facilities
- Critical Workforce Shortage in Western United States
 - **2 FPE engineering based programs nationally**
 - Univ. of Maryland
 - Worcester Polytechnic Institute, Massachusetts
 - **2 FPE non-engineering programs nationally**
 - Oklahoma State Univ.
 - Eastern Kentucky Univ.

What are job opportunities?

- 3 + job positions for every WPI or UM graduate
- \$70,000+ starting salaries

Why Cal Poly, San Luis Obispo?

- approached by industry and encouraged by SFM Dargan and current CA FPE's
- FPE industry grounded in science and engineering
- Cal Poly rated BEST Engineering university in Western United States
- Cal Poly's Learn By Doing approach, lab intensive education programs
- University support at all levels, consistent with strategic plan on developing new academic programs in Disaster Management, Homeland Security, and Fire Protection

Cal Poly's Implementation Plan

- **FPE Certificate Program – Start Fall 2008**
 - Current Professional Engineers or current engineering students
 - Partner with WPI or Univ. of Maryland through Continuing Education
 - Fire Dynamics
 - Fire Suppression Systems
 - Failure Analysis
 - Structural Fire Protection Systems
 - Senior Design Project in Fire Protection
 - Co-op employment with FPE Firm
- **4+1 Masters Degree-Start Fall 2009**
 - Mechanical, civil, architectural, aeronautical, electrical, electronic, industrial engineering Bachelors degree students
 - Student Co-op employment with Engineering firms
- Cal Poly intends to fill a western U.S. niche by developing additional research and education programs in building and systems designs related to Wildland Urban Interface Fire Protection.

Other Cal Poly programs of interest

Natural Disasters, Coastal Infrastructure, and Emergency Management Center of Excellence

US Dept of Homeland Security Science and Technology Directorate. "Center of Excellence" 6 year grant award in a multi-university partnership co-lead by University of North Carolina and Jackson State University.

Cal Poly's role and focus areas:

Disaster Resistant Community design	Wildland Fire
Engineering programs	Emergency Management systems
Education and Community Outreach	

Homeland Security and Emergency Management Training and Education Metrics

California Disaster Resource Assessment Project- CA Office of Homeland Security and CA Office of Emergency Services

- Demographics of Emergency Managers and emergency management functions statewide
- Census of Higher Education programs in California colleges and universities
- Census of related public and private training programs and academies
- Gap analysis of demand versus supply

California Hazard Mitigation Plan- CA Office of Emergency Services

Cal Poly updated and achieved "Enhanced Mitigation Plan" status from FEMA for the 2007 Ca Hazard Mitigation Plan

- Results in higher disaster assistance award from FEMA during Presidential Disaster Declarations (from 75% to 85%)
- One of very few FEMA approved State "Enhanced" Plans

Minor in Disaster Management and Homeland Security

- Partnership with CSTI- CA OES
- Target undergraduates in diverse majors

Masters Degree in Disaster Management and Homeland Security

- Interdisciplinary degree

City and Regional Planning	Engineering
Forestry and Environmental Protection	Political Science
Business	Agriculture

CSU Homeland Security and Disaster Management Planning Summit