CALIFORNIA STATE POLYTECHNIC UNIVERSITY POMONA

Materials Engineering Minor
For Mechanical Engineering Majors

Materials Engineering (MTE) relates the properties of materials to their structure. All engineers are called upon to work on new ideas and with novel materials. Almost every field of engineering is limited by the properties of available materials. The graduate with an understanding of the principles of materials behavior possesses a decided career advantage.

The College of Engineering provides a minor in Materials Engineering to the student who satisfactorily completes 24-units requirement within her/his major curriculum. It is frequently possible for students to complete the minor within the normal requirements for an engineering degree through careful advisement including authorized substitutions.

Requirements for the MTE Minor

Core Courses (Total Required = 12)

Engineering Materials	**ME 315**	**(4)**
Materials Science and Selection Lab	**ME 350L**	**(1)**
Strength of Materials	**ME 218**	**(3)**
Strength of Materials Lab	**ME 220L**	**(1)**
Thermodynamics	**ME 301**	**(4)**

MTE Elective Courses (Total Required = 12)

Take any ***three*** of the following courses for a ***total of 12 units*****.**

Corrosion and Degradation of Materials/Laboratory	**MTE 401/L**	**(3/1)**
Mechanical Metallurgy and Lab	**MTE 320/L**	**(3/1)**
Fracture and Failure Analysis	**MTE 422**	**(4)**
Physical Metallurgy	**MTE 406/416L**	**(3/1)**
Ceramic Materials/Laboratory	**MTE 407/L**	**(3/1)**
Composite Materials/Laboratory	**MTE 408/418L**	**(3/1)**
Mechanics of Composite Materials	**ME 499**	**(4)**
Polymer Engineering/Laboratory	**MTE 303/L**	**(3/1)**

Materials Engineering (Interdisciplinary) Projects Students opting for the minor have the opportunity to participate in several interesting materials projects, some of which will be sponsored by industry. This will satisfy senior projects requirements for the ME major

Project Design Principles and Application	**EGR 481**	**(2)**
Project Design Principles and Application	**EGR 482**	**(2)**