

UNIVERSITIES & REGULATORY AGENCIES

# UC Santa Cruz Materials Science Lab Expansion



## OVERVIEW

As MEP and Hazmat consultants, IES provided detailed engineering design and code consulting service for the MOCVD and Materials Science Laboratory expansion. Our engineering team led the effort in designing specialty gas storage, distribution and abatement systems and Industrial Ventilation systems in compliance with the latest codes and ordinances and in conformance with the Campus Fire Marshal's requirements.

## PROJECT DETAILS

- Retrofit 3,000 sq. ft. of (E) Class-100 Cleanroom into a MOCVD and Materials Science Lab.
- Designed Makeup Air and Industrial Ventilation Systems and a corrosive exhaust system
- Designed specialty toxic, flammable and pyrophoric gas storage and distribution systems.
- Designed Toxic & Specialty Gas and Hazardous Materials Monitoring & Control System

## IES SOLUTIONS

- Converted two existing Cleanroom recirculating air handlers into 100% Makeup Air Handling Units.
- Designed a new industrial ventilation system to:
  - Maintain less than ½ IDLH of toxic gas upon accidental release.
  - Maintain less than 25% of the LEL of flammable and pyrophoric gases in exhaust ductwork in the event of an accidental release.
- Designed a dry scrub toxic and pyrophoric gas abatement system.
- Incorporated Hazardous Materials transport and delivery path monitoring with the toxic gas monitoring system to comply with the Campus Fire Marshal's requirements for transporting HPM's through an emergency exiting corridor.

## LOCATION

Santa Cruz, California

## TEAM (PARTNERS)

Architect - WHL Architects  
Structural - Peoples Associates

## PROJECT DURATION

Design & Permit - 12months  
Construction – 12 months

## PROJECT VALUATION

> \$2,500,000

## ABOUT IES

Integrated Engineering Services (IES) is an established firm providing innovative and cost-effective solutions to meet your complex engineering, design and operational needs.

When experience, knowledge and innovation matter most.