

**Course Title: Optical Proximity Sensing
Technology: Basic Principles & Application in
Object Detection**

Course Code: EEA 178

Course Background / Summary:

This course describes optical proximity sensing principles and technology, as well as the associated specialty fiber types and components required for their system integration. A broad overview of diverse applications is made with a particular emphasis on object detection. Technical personals, trainers, and instructors who wish to widen their knowledge of optical proximity sensor technology and application.

Course Objectives:

- Become familiar with the terminology used to describe the switching performance of optical proximity sensor
- Become familiar with the response characteristic of a through-beam sensor
- Determine which materials can be detected with the sensor
- Become familiar with the range of applications and response characteristics of a retro-reflective sensor
- Become familiar with the range of applications of optical proximity switches with fiber-optic cable.
- Become familiar with the setup and function of an optical diffuse light sensor.

Target Audience:

- Technical managers, scientists, engineers, technicians, and research students who wish to learn about optical-sensing technology and review its implementation and applications for industry use.

Course Duration: 3 Days

Course Contents

1.0 Sensor Terms, Multi Sensor System, Characteristics	4.0 Optical Proximity Sensor – Types and Types of Reflection
2.0 Optical Proximity Sensor – Design	5.0 Optical Proximity Sensor – Fibre-Optic Cable Layouts
3.0 Optical Proximity Sensor – Basic Circuit Diagram	6.0 Practical with Applications