

Week 11-14

PROJECT

BACKGROUND INFORMATION:

During the course each student will perform a final mini project. The students can set up a group of up to two persons for each project. The project will take 4 weeks to complete.

Week 1: Each group will investigate a suitable topic for the project in the field of optoelectronics. Different groups should not choose the same project topic. The project topic must be approved by the instructor. The instructor may ask you to change the subject of the project.

Week 2-3: A two-week period for the realization of the project should be well evaluated. During this period, the design of the project, experimental studies and installation on the electronic card/board will be carried out. In addition, the project report and oral presentation should be prepared.

1. Project Cover page.
2. Project subject and Abstract
3. Material and Method (working principle, circuit diagram, software, layout circuit, material list etc.)
4. Measurement and test results, comments.
5. References.

Week 4: Demonstration of the project work and oral presentation (approx. 15 min.). Evaluation will be done by an expert committee

Some project topics are as follows. You can choose a different topic.

- 1- Optical Barcode Reader
2. Imaging of blood vessels using near infrared radiation
3. Design of an optical signal generator
4. Optical takometer
5. Infrared remote receiver and transmitter circuit
6. Optical remote distance meter
7. Color sensor
8. infrared sound communication
9. line following vehicle
10. Infrared remote temperature meter
11. Optical detection of moving objects.
12. Optical Burglar Alarm
13. Automatic door with optical sensor (For example, car parking door, counting vehicles entering and leaving).