## CHAPTER 7 CONCLUSION

An engine oil alert system is a crucial tool for preventing engine.

## REFERENCES

Y. Li, J. Wu, and Q. Guo, “Electromagnetic sensor for detecting wear debris in lubricating oil,”

J. M. Wakiru, L. Pintelon, P. N. Muchiri, and P. K. Chemweno, “A review on lubricant condition monitoring information analysis”

Y. Du, T. Wu, and V. Makis, “Parameter estimation and remaining useful life prediction of lubricating oil with HMM,”

J. Zhu, J. M. Yoon, D. He, and E. Bechhoefer, “Online particlecontaminated lubrication oil condition monitoring”

**RAJALAKSHMI ENGINEERING COLLEGE DEPARTMENT OF ECE**

**PROGRAM OUTCOMES (POs)**

Engineering Graduates will be able to:

* 1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
  2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
  3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
  4. **Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
  5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
  6. **The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
  7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
  8. **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
  9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
  10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and

write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

* 1. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one’s own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
  2. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

**PROGRAM SPECIFIC OUTCOMES (PSOs)**

1. An ability to formulate solutions for practical societal requirements using communication engineering.
2. To design and formulate solutions for industrial requirements using Electronics and Communication engineering
3. To understand and develop solutions required in multidisciplinary engineering fields**.**

**COURSE OUTCOMES (CO)**

|  |  |
| --- | --- |
| **CO1** | To conceive an idea and develop confidence in designing, analyzing and executing the project in the emerging fields of Electronics and Communication and multidisciplinary research areas. |
| **CO2** | Identification of modern tools for the implementation of project through simulation and prototype. |
| **CO3** | Develop a product that meets the specified needs in industrial applications with appropriate consideration for the public health and safety, societal, environmental and ethical considerations. |

# EC19811 –PROJECT WORK

**Project Title: Engine Oil Alert System and Pollution Control**

|  |  |  |
| --- | --- | --- |
| **Batch Members :** | **PRAVEENKUMAR. S** | **(190801120)** |
|  | **RAGHUL. R** | **(190801127)** |
|  | **SARUHASSAN. T** | **(190801152)** |

**Name of the Supervisor: Mr.Gururaj.D, M.E.,** Assistant Professor (SS)

**CO - PO – PSO matrices of course**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| PO/PSO  CO | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 | PSO3 |
| CO1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CO2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CO3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Note: Enter correlation levels 1, 2 or 3 as defined below:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High), If there is no correlation, put -“

**Signature of the Supervisor**