

The final certification and acceptance of TW ensures the satisfactory performance of laboratory work and minimum passing in the TW.

| Course Code | Course Name              | Teaching Scheme (Contact Hours) |        |      | Credits Assigned |                         |           |              |       |
|-------------|--------------------------|---------------------------------|--------|------|------------------|-------------------------|-----------|--------------|-------|
|             |                          | Theory                          | Pract. | Tut. | Theory           | Tut.                    | Pract.    | Total        |       |
| FEL202      | Engineering Chemistry-II | -                               | 01     | -    | -                | -                       | 0.5       | 0.5          |       |
| Course Code | Course Name              | Examination Scheme              |        |      |                  |                         |           |              | Total |
|             |                          | Theory                          |        |      |                  |                         | Term Work | Pract. /oral |       |
|             |                          | Internal Assessment             |        |      | End Sem. Exam.   | Exam. Duration (in Hrs) |           |              |       |
|             |                          | Test1                           | Test 2 | Avg. |                  |                         |           |              |       |
| FEL202      | Engineering Chemistry-II | --                              | --     | --   | --               | --                      | 25        | --           | 25    |

**Outcomes:** Learner will be able to...

1. Determine moisture and ash content of coal
2. Analyze flue gas
3. Determine saponification and acid value of oil
4. Determine flash point of a lubricating oil
5. Synthesize a drug and a biofuel.
6. Determine na/k and emf of cu-zn system

### Suggested Experiments

1. Determination of Moisture content of coal.
2. Determination of Ash content of coal.
3. Flue gas analysis using Orsat's apparatus.
4. Saponification value of oil
5. Acid value of oil
6. Determination of Na/K by Flame photometry.
7. Preparation of Biodiesel from edible oil.
8. To estimate the emf of Cu-Zn system by Potentiometry.
9. Synthesis of Aspirin.
10. Determination of Flash point of a lubricant using Abel's apparatus

### Term work:

Term Work shall consist of minimum five experiments.

The distribution of marks for term work shall be as follows:

- Laboratory work (Experiments and Journal) : **10 marks**
- Assignments and Viva on practicals : **10 marks**
- Attendance (Theory and Practical) : **05 marks**

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