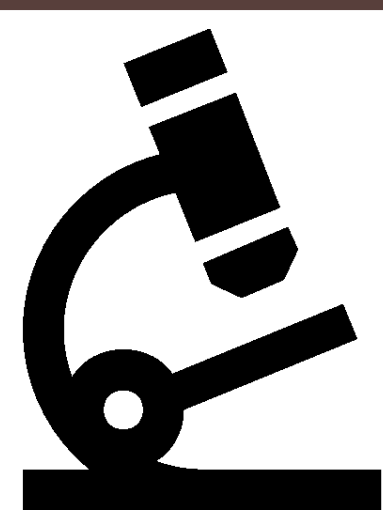




COURSE SYLLABUS CLEANER PRODUCTION

Credits: 02 (Lectures 02 – Practices 0 – Self-study 06)
Code: MT 03010



Course Expected Learning Outcomes

| Indicator | Upon the completion of the course, student able to | Expected learning outcomes of program |
|-----------|--|---|
| Knowledge | | |
| CELO1 | Explain the basic concepts of CPI | ELO2: Analyze environmental quality including designing and conducting experiments, collecting data, and interpreting results. |
| CELO2 | Analysis of technical solutions to achieve cleaner production | ELO2: Analyze environmental quality including designing and conducting experiments, collecting data, and interpreting results. |
| CELO3 | Implement the CP assessment process | ELO4: Develop sustainable solutions for the management and protection of the environment and natural resources based on different perspectives of natural science, social science, and humanities |
| CELO4 | Implement cleaner production in some industries | ELO4: Develop sustainable solutions for the management and protection of the environment and natural resources based on different perspectives of natural science, social science, and humanities |
| Skills | | |
| CELO5 | Perform material balance calculations, cost estimates of waste sources, feasibility analysis of cleaner production solutions | ELO6: Apply systematic, critical, and creative thinking in solving problems in the environmental and related fields |
| CELO6 | Reporting and presentation skills | ELO7: Work in groups and lead multi-functional teams effectively. ELO10: Use modern technology, equipment, and techniques in the management and protection of the environment and natural resources. |
| Attitude | | |
| CELO7 | Enthusiastic, proactive and creative in learning | ELO11: Define a clear future orientation, career passion and a sense of lifelong learning. |

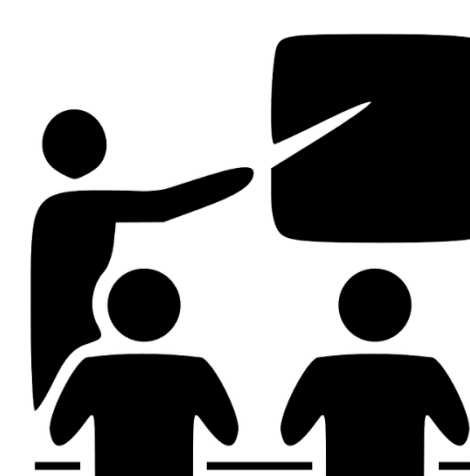


Course contents

Chapter 1: An overview of cleaner production

Chương 2: Cleaner production assessment procedure

Chương 3: Cleaner production in some industries



Learning methods

- Join in the discussion, exchange idea in class
- Self-study: reading documents, doing exercises, studying materials provided by lecturers through online learning (E-learning; MS teams)
- Group learning: discuss issues related to the environmental protection planning
- Writing an essay and doing presentation



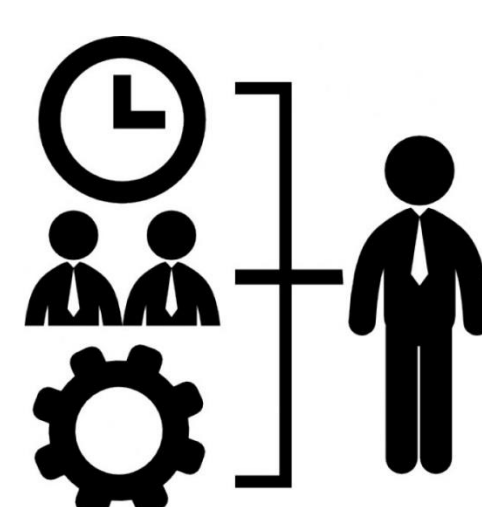
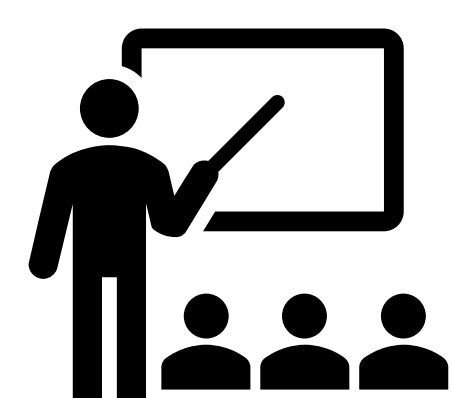
Evaluation and grading

- Grading scale: 10
- Evaluation:

| Class participation | Group reports and presentation | Final examination |
|---------------------|--------------------------------|-------------------|
| 10% | 30% | 60% |

Responsibility of students

- Attendance: Students must attend at least 75% of the class and participate in class activities
- Self-study: Students should read, synthesizing materials provided by lecturers through E-learning system, conducting group discussions with the instructor's guidance
- Presentation and Discussion: Students must participate in class discussions; work in groups to make presentations; develop thematic essays on demand
- Final exam: students must take the final exam



Key lecturers

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