

NCO203 Critical Thinking and Problem Solving

Level: 2

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY SEMESTER

Synopsis:

In this course, students use a reasoned process to choose a course of action to achieve intended goals by executing a problem solving framework on a problem of their choice. The framework consists of defining the problem, identifying possible solutions, evaluating the possible solutions and implementing the solution. Problem solving functions as a vehicle for teaching students critical thinking tools like awareness of cognitive biases and informal fallacies, ethical reasoning, and negotiation skills like empathetic listening in order to identify common interests. The tools are systematically and intentionally introduced to students in the form of exercises infused into their implementation of the problem solving framework. They help students to question, reason inductively and deductively, and make correct analyses, inferences and evaluations. These tools not only facilitate students' noticing and integrating new information in changing contexts by thinking using micro and macro understandings, but also facilitate consensus building on team directions. As such, they conduce to decision making in multidisciplinary contexts. At the end of the course, students are assessed on both problem solving and critical thinking.

Topics:

- A problem solving framework
- Analysing a problem
- Cognitive biases
- Informal fallacies
- Ethical reasoning
- Constructive communication
- Divergent thinking
- Convergent thinking
- Making sense of information
- Evaluating solutions
- Testing and monitoring solutions
- Writing a problem solving report

Learning Outcome:

- Implement a problem solving framework.
- Apply cognitive biases and informal fallacies.
- Practise ethical reasoning.
- Analyse a problem.
- Organise information.
- Evaluate possible solutions.

Assessment Strategies (Daytime Class):

Components	Description	Weightage Allocation (%)
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Overall Continuous Assessment	PRE-CLASS QUIZ 1	5
	GROUP BASED ASSIGNMENT 1	50
	QUIZ 1	15
	DISCUSSION BOARD 1	30
Total		100