

Course Description

MEDD8897 Science Curriculum: Concepts and Themes

Course description		
<p>This course discusses the frequently encountered concepts and themes in the scholarly and professional dialogues on science curriculums. After an initial survey of the different schools of thought on the aims and roles of science education, the key concepts and significant controversies associated with the four major categories of learning goals, namely, learning science, doing science, learning about science, and addressing socioscientific issues will be considered. Subsequently, selected contemporary topics (e.g., crosscutting concepts, interdisciplinary STEM education, out-of-school science learning) will be explored. It is expected that students' sphere of curricular concern will be gradually expanded throughout the course to become scholarly and transformative curriculum developers and leaders.</p>		
Course objectives		
<p>The course aims to provide students with the foundation for understanding issues about curriculum development, implementation, and evaluation in science education. The specific learning outcomes are:</p> <ul style="list-style-type: none"> • Evaluate and develop learning and teaching strategies for the achievement of the key goals of science education • Apply the understanding of the key curriculum processes in the planning, implementation, and evaluation of science curriculums at school and territorial levels • Analyse current themes of science education critically and devise effective curricular strategies to enhance the quality of science learning and teaching 		
Course learning outcomes		Aligned programme learning outcomes (PLOs)
1. Evaluate and develop learning and teaching strategies for the achievement of the key goals of science education		PLOs 1, 4, 5
2. Apply the understanding of the key curriculum processes in the planning, implementation, and evaluation of science curriculums at school and territorial levels		PLOs 1, 2, 3
3. Analyse current themes of science education critically and devise effective curricular strategies to enhance the quality of science learning and teaching		PLOs 1, 4, 5
Course assessment methods		
Assessment method	Weighting	Aligned course learning outcome(s)
In-class participation and Moodle tasks	15%	CLO 1
Group presentation	35%	CLO 1
Individual essay	50%	CLOs 1-3
Course content and topics		
<ul style="list-style-type: none"> • Preliminaries • Goals of science curriculum • Learning science • Learning to do science and learning about science • Values education and socioscientific issues • Interdisciplinary learning experience of science and STEM • Science education in the community • Science curriculum in our globalised era 		
Required / recommended readings and online materials		
Please refer to course outline in Moodle		

Other additional course information
Nil