

INNOVATIVE MICRO-CREDENTIALS FOR BASICS OF CHEMISTRY

ABSTRACT

This study examines the challenges of using Cisco Webex for teaching and learning at the School of Distance Education, Universiti Sains Malaysia, and the development of micro-credentials (MCs) to address these issues. The MCs, designed for the Basics of Chemistry course, are flexible and accessible, providing a sense of belonging beyond a single microcredential. The study found that technology-enhanced learning through MCs offers a pedagogical basis for competency-based assessments and is suitable for open and distance learning, enabling learners to repeat their learning and apply concepts in their workplace. Ultimately, this study emphasizes the importance of technology-enhanced learning in improving teaching and learning outcomes.

PROBLEM STATEMENT

The shifting of online learning experience towards technology-enhanced learning has resulted in the drive towards MCs. MCs is a flexible educational learning approach which is designed as "bite-sized" with shorter duration.

OBJECTIVE

To design and implement a technology-enhanced microcredential course on 'Basics of Chemistry' with the aim of improving the efficacy and effectiveness of teaching and learning in the field. The course will incorporate interactive and innovative digital tools and resources to enhance learner engagement and retention of key concepts, and will be designed to meet the needs of learners seeking flexible and accessible learning opportunities in the subject.



ADDED VALUES

- Re-skilling and upskilling
- Stackable credits/units
- Flexible learning



USEFULNESS

- **Targeted Learning** - allow learners to focus on specific subject areas where they need to develop their skills, without having to commit to a full time degree program
- **Cost-Effective** - shorter and cost-effective than traditional degree programs
- **Flexibility** - offer learners the flexibility to learn at their own pace and on their own schedule
- **Career Advancement** - enabling learners to gain the skills and knowledge for career progression
- **Lifelong Learning** - provide learners with opportunities to stay up-to-date with the latest developments in their field



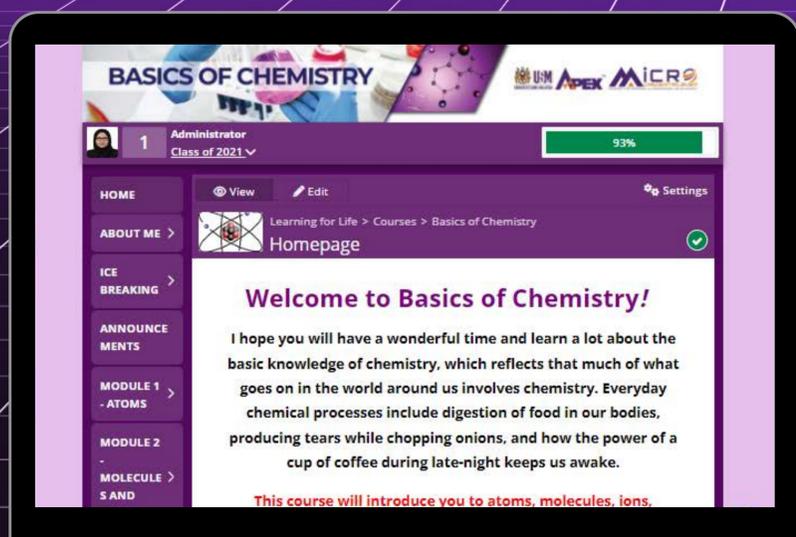
COMMERCIALIZATION POTENTIAL

- Basics of Chemistry course has been listed in the OpenLearning Marketplace
- MCs course can be offered to non-students
- Globalised online learning to include external learners locally and internationally



RECOGNITION

- Copyright : FM2021P05563
- Gold Award (Design) and Special Jury Award - International Virtual Educational Invention, Innovation, and Design Competition 2022 (IVEDIIC2022)



To view the roadshow of the course, please scan the barcode below:



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