

PROGRAM FEES

LOCAL STUDENT	INTERNATIONAL STUDENT
RM 22,600	USD 9,000



INOR

HIGHER INSTITUTION CENTRE OF EXCELLENCE (HICoE)

MODE OF PROGRAM

Mixed Mode
(70% Research + 30% Coursework)

COURSEWORK COMPONENT

Lecture, Assignment,
Project, Presentation,
Test, Examination

RESEARCH COMPONENT

Experimental Work, Presentation,
Dissertation Writing, Viva-Voce

DURATION

Full Time (min. 1 year max. 2 years)
Part Time (min. 1.5 years max. 3 years)

PROGRAM UNIT (40 UNITS)

36 units - Core Courses
4 units - Elective Courses

PROGRAM OVERVIEW

Contact Us

Institute of Nano Optoelectronics Research and
Technology (INOR),
Universiti Sains Malaysia,
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ACADEMIC PROGRAM

MASTER OF SCIENCE IN NANO-OPTOELECTRONICS

INSTITUTE OF NANO OPTOELECTRONICS
RESEARCH AND TECHNOLOGY (INOR)

<https://inor.usm.my/>

INTRODUCTION TO INOR

The Institute of Nano Optoelectronics Research and Technology (INOR) is a Higher Institution Centre of Excellence (HICoE) accredited by the Ministry of Higher Education of Malaysia, pioneering in the niche area of III-Nitrides Epitaxy for Optoelectronics and Advanced Devices. INOR has been intensively optimizing epitaxial growth of III-Nitrides layers since early 2018. Through the current HICoE program, the effort is continued by focusing on improvements of the material quality of the layers with different material compositions and various device designs. This program is divided into five projects: aluminum gallium nitride (AlGaIn) UV LEDs, long-wavelength emission indium gallium nitride/gallium nitride (InGaIn/GaN) LEDs, InGaIn solar cells, GaN-based nanophotonics devices, AlGaIn/GaN high-electron-mobility transistors (HEMTs), and GaN UV detectors.

OVERVIEW

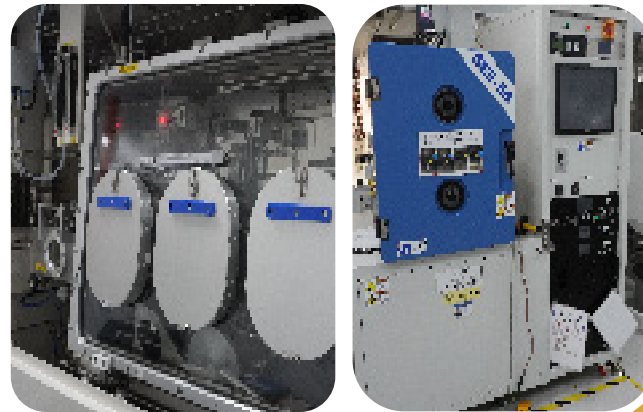
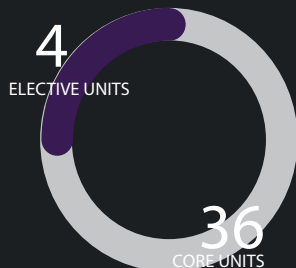
Master of Science in Nano-Optoelectronics is the first program being offered in INOR on Mixed Mode basis. As a Mixed Mode program, 70% of research work and 30% of coursework is offered. Besides, dissimilar from the program offered by other universities from local or overseas, this program is unique because of the integration of both nanotechnology and optoelectronics compositions in the structure.

PROGRAM CONTENT

70%
RESEARCH

30%
COURSEWORK

TOTAL PROGRAM CREDIT



PROGRAM NAME

Master of Science in Nano-Optoelectronics
Mixed Mode - 70% Research + 30% Coursework

PROGRAM DURATION

Full Time [min. 1 year, max. 2 years]
Part Time [min. 2 years, max. 3 years]

PROGRAM VALUE

"Accreditation by the Malaysian Qualifications Agency with the Registration No. MQA/SWA18036" since 01 October 2020.

Keeping pace with current global trends and the nation's aspiration for sustainable development—particularly within the Electrical and Electronics (E&E) sector—green technologies such as solid-state lighting, renewable energy, energy-efficient electronic devices, air and water purification systems, optical communication, and nanomedicine have made remarkable advances and significant impacts on the global market. In response to these developments, the Master of Science in Nano-Optoelectronics program is designed to produce highly knowledgeable graduates with strong technological competency in nano-scale materials, epitaxial growth, and semiconductor device fabrication. The program provides a structured and rigorous learning pathway for graduates to advance to doctoral studies or to accelerate their careers in key E&E sub-sectors—particularly semiconductors and optoelectronics (e.g. LEDs and solar cells).

CURRICULUM STRUCTURE

CORE COURSES

INT501 [4 UNITS] : Physics and Technology of Nanomaterials

INT502 [4 UNITS] : Growth and Fabrication of Optoelectronic Devices

INT505 [8 UNITS] : Dissertation I

INT506 [20 UNITS] : Dissertation II

ELECTIVE COURSE CHOOSE ONE ONLY

INE503 [4 UNITS] : Advanced Growth Technology

INE504 [4 UNITS] : Advanced Optoelectronics

ADMISSION REQUIREMENTS

1. Candidate must possess Bachelor's Degree with honours in the field of Science or Engineering and CGPA of at least 2.75 or equivalent from recognised university.
2. Candidate with CGPA 2.50 - 2.74 must possess experience in the aspect of research for at least 1 year or professional experience in related field for at least 1 year or 1 journal publication (not proceeding) in the applied field or at least Grade B for major/elective courses or at least Grade B+ in the final year project.
3. Candidate with CGPA 2.00 - 2.49 must possess experience in the aspect of research for at least 5 years or professional experience in related field for at least 5 years and 1 journal publication (not proceeding) in the applied field or at least Grade B for major/elective courses or at least Grade B+ in the final year project
4. For candidate who does not fulfill any of the aforementioned criteria, he or she must possess APPEL A (APPEL T-7) certificate.