UNIVERSITY OF WOLVERHAMPTON
INTERNATIONAL STUDY CENTRE

INTERNATIONAL YEAR ONE: COMPUTING



Programme Leader: Dr. Emeka Okechukwu

Dr. Emeka Okechukwu is STEM Programme Lead at the University of Wolverhampton International Study Centre. He joined Malvern International in January 2026 as a Lecturer and Module Lead in Health Sciences and Social Care before being appointed STEM Programme Lead in September 2026.

With over 15 years of university teaching and research experience, he leads the Health Sciences and Social Care, Engineering, Sciences, and Computing pathways, supporting academic quality, curriculum development, staff development, and student success. Emeka is passionate about delivering innovative, inclusive, and research- and industry-informed education that promotes excellence in student achievement, progression, and employability.

Module overview:

English for Technical Communication (Computing and Engineering)

This module develops students' ability to communicate effectively in technical and professional contexts, equipping them with the skills to produce clear, structured, and ethically sound technical documentation. Students will engage with academic and industry-based research, learning to evaluate sources, synthesise information, and integrate AI tools responsibly. The module emphasises technical report writing, professional presentations, and digital research communication, ensuring students are prepared to convey complex ideas to diverse audiences. Students specialising in Engineering will focus on technical proposals, failure analysis, and visual communication in engineering reports, while those in Computing will explore software documentation, cybersecurity reporting, and data visualisation. The module follows a process-based learning approach, where students progressively refine their research, writing, and presentation skills through formative feedback, peer collaboration, and structured reflection.

Computational Mathematics

This module provides students with the mathematical foundations essential for computing, and cybersecurity. Covering discrete mathematics, numerical methods, probability, and algorithmic thinking, students will develop problem-solving skills and learn to apply mathematical models using computing scenarios. Through structured activities, computational programming, and case studies, students will gain practical experience using Python and MATLAB.

Programming Fundamentals

In this module, you will be introduced to the principles of programming and software development, equipping you with essential coding, and debugging skills. You will learn to design, implement, and test software applications using industry-standard programming languages, following best practices in algorithm development, object-oriented programming, and software engineering.

Systems Architecture and Operating Systems

In this module, you will be introduced to the principles of computer architecture and operating systems, providing a comprehensive understanding of hardware and software interactions, system performance, and resource management. You will explore core system components, operating system functionalities, and system-level programming, equipping you with the technical knowledge required for further study in computer science and cybersecurity.