

ANNEX B

New Courses offered by Schools for AY2024/25

School of Computing and Information Systems (SCIS)

SCIS is offering the following new courses:

Computer Graphics and Virtual Reality

This course equips students with the skills to create and manipulate visual content using advanced computational techniques. It aims to provide a comprehensive understanding of these principles, enabling the design and implementation of sophisticated visual systems for innovative solutions across various industries.

Quantum Computing in Financial Services

This course provides an understanding of quantum computing, how it differs from classical computing and what the main applications are, now and in the future. Emphasis is placed on FinTech/Banking applications, such as in trade and investments. Furthermore, you can experience programming real quantum computers and explore the quantum world.

Digital Ethics for Responsible Computing

Responsible innovation requires understanding potential risks and aligning with human values. But how can we ensure that technology advances in a manner that is ethical, sustainable, and beneficial for all?

This course explores ethics in computing. Through case studies and frameworks, students will develop skills in critical and nuanced thinking about complex issues at the intersection of technology and society.

Advanced Programming and Design

This course prepares students to become efficient and proficient software developers. Building upon students' familiarity with object-oriented concepts and working knowledge of Java, it will introduce students to important clean coding concepts, continuous refactoring, test-driven development, (Object-Oriented and architectural) design patterns and SOLID principles - all complemented by hands-on coding exercises.

School of Economics (SOE)

SOE is offering the following new courses/programme:

Research Methods in Economics

This course will train students to conduct economic research. Students will critically evaluate research papers, refresh the methodology with emphasis on practical applications to the topic of their interest, propose and refine their research question suitable for a Senior Thesis and learn programming skills necessary for the data and computational analytics in the proposed Senior Thesis.

Big Data Analytics with Spark

Students will delve into the world of big data analytics using the powerful framework of Apache Spark. Focusing on PySpark, the Python API for Spark, participants will gain practical skills in handling large-scale data, performing statistical analysis, and employing machine learning techniques.

Data Science with Python

This course seeks to introduce students to the various steps in data science via coding in the Python language. Students will be introduced to the basics of coding in Python, as well as various data wrangling and data visualization techniques using Python. Students will be exposed to the theoretical knowledge underpinning machine learning and apply what they have learnt to model real data using machine learning techniques. Topics include: Data visualisation, data wrangling, exploratory data analysis, theoretical machine learning and applications of machine learning.

PhD programme

Starting from AY 2024-2025, SOE will introduce a BSc-MPhil fast-track programme. This initiative aims to actively encourage BSc students from SOE to embark on advanced studies and research in Economics at an accelerated pace. The programme seeks to integrate undergraduate education with advanced research opportunities, providing a streamlined pathway for students eager to pursue research-oriented roles in academia, government, international organisations, and the private sector.

School of Accountancy (SOA)

SOA is offering the following new courses:

Robotic Process Automation for Accounting

This course on Robotic Process Automation (RPA) in accounting explores the integration of RPA into business operations. Students will learn a structured framework for RPA implementation, assess process suitability for automation, and gain hands-on experience with leading RPA software like UiPath and Power Automate through a series of lab-based sessions. The curriculum includes project-based learning, where students design and develop an RPA application for a specific accounting function. Additionally, the course covers the compliance and risk management aspects of RPA, equipping students with the skills to navigate the complex landscape of business technology transformation.

Sustainability Reporting

Sustainability reporting is the practice of disclosing an organization's economic, environmental, social, and governance (ESG) performance and impacts. This course presents a review and analysis of the theoretical foundations of sustainability accounting and its reporting issues in practice. It will focus on existing and emerging frameworks for developing corporate environmental, social, and governance (ESG) performance metrics, assessing their reliability, reporting to stakeholders, and incentivising managers based on ESG metrics. It will also focus on the user perspective of sustainability reporting so individuals and organisations can make informed decisions, drive positive social and environmental change, and contribute to a more sustainable and responsible global economy.