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| Academic Year | AY2022/23 |
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| Academic Units | 2AUs |
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| Tutorial Hours | 26 |
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## COURSE AIMS

With digitalisation now becoming the new normal in our daily life, this course seeks to equip students from different disciplines with problem-solving techniques with the aid of computers and to enable them to acquire common but essential digital skills that are crucial in today's workforce.

In this course, students will learn how to apply the concept of computational thinking and quantitative reasoning to solve problems and analyse data. They will also learn how to identify online threats and understand the principles of ethics and intellectual property rights in the digital world. Students will also be exposed to current issues in the digital world, such as cybersecurity and the rise of fake news. In addition, students will also learn how to use some of the latest online tools for effective presentation, communication, and collaborative skills in teams during the course.

## INTENDED LEARNING OUTCOMES

By the end of this course, students should be able to:

1. Apply structured approaches to solve complex problems by breaking them into sub-problems.
2. Apply quantitative reasoning to analyse data, guide problem-solving, and support decision-making.
3. Use digital tools and technologies to search for, assess, analyse, develop, and share digital content and solutions through different media forms.
4. Interact and collaborate through digital platforms/channels.
5. Demonstrate use of digital technology and online presence responsibly, ethically, legally, and with care.
6. Describe current developments and issues in the digital world.

## COURSE CONTENT

This course will cover the following topics:

1. Computational Thinking Problem-Solving Techniques
2. Quantitative Reasoning Techniques
3. Managing Cybersecurity
4. The World of Digital Misinformation
5. Principles of Data Ethics in the Digital World
6. Intellectual Properties, Rights and Data Privacy in the Digital World
7. Latest and Emerging Technology Trends

## REFERENCES

1. Quantitative Reasoning, Thinking in Numbers; Eric Zaslow, Cambridge University Press, 2020
2. Microsoft Excel 2019 Data Analysis and Business Modeling; Wayne Winston, Microsoft Press, 2019 6th edition
3. The Key to a Good-Paying Job Is...Microsoft Excel?; by Lauren Weber, The Wall Street Journal 2015