



An Institute of



**NTU**  
**OPEN**  
**HOUSE**  
**2025**

# Mathematics & Computational Thinking



**ACADEMIC SUBJECT AS**

- Linear Algebra
- Calculus
- Finite Mathematics
- Number Theory
- Statistics
- Computational Maths
- Differential Equations
- Complex Analysis
- Real Analysis
- Modern Algebra
- Modelling
- Combinatorics
- Operations Research
- Graph Theory
- Geometry
- ... and more

**CURRICULUM STUDIES CS**

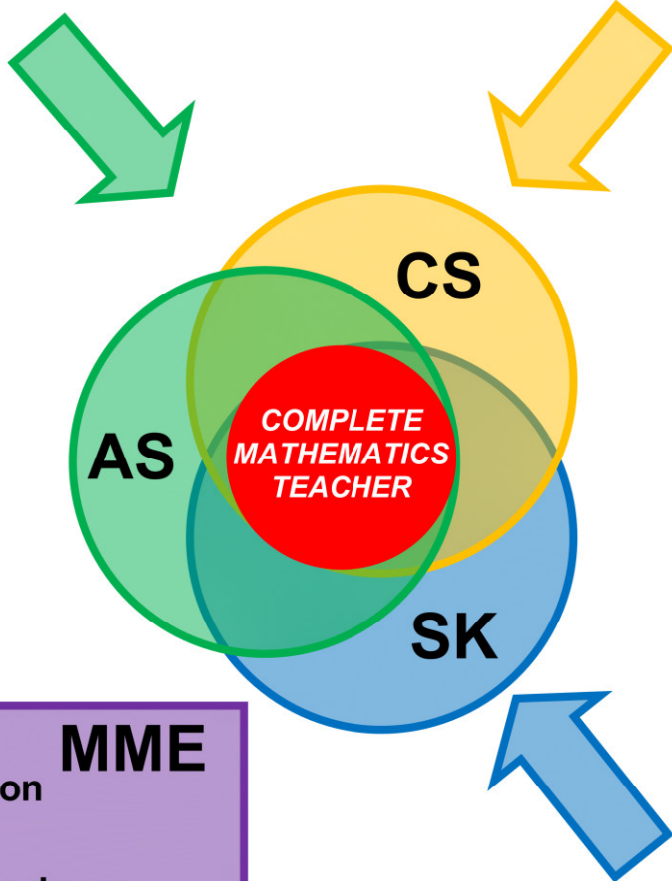
- The Teaching and Learning of Primary Mathematics
- Assessment Literacy for the Primary Mathematics Classroom
- Teaching and Learning Mathematics (Secondary)
- Specialised Areas in Teaching and Learning Mathematics (Secondary)

**Mathematics and Mathematics Education Academic Group MME**

Visit us at: [math.nie.edu.sg](http://math.nie.edu.sg)

**SUBJECT KNOWLEDGE SK**

- Number Topics
- Geometry Topics
- Further Mathematics Topics
- Computer Literacy through Coding and Applications



"Coming into NIE, I was worried that the rigour of the mathematics offered by MME would not be on par with other universities, but I was pleasantly surprised. The mathematics courses were challenging but well-taught, and gave me a better understanding of the concepts that I would need to teach in the classroom.

Highlights of the MME program included the small class sizes. This meant that I got to know my professors and classmates very well, and we were able to build strong relationships. The professors were all very caring and supportive, and they were always willing to help us out.

I also appreciated the fact that most of the professors were former school teachers. This meant that they had a lot of experience in the classroom, and they were able to share their insights with us. They also had a lot of great ideas and practices to teach mathematics effectively."

*Alfred Tan Jie Heng (graduate BSc (Mathematics & Computational Thinking and Education) programme, sponsored to read for the MSc (Artificial Intelligence) at Nanyang Technological University)*

"I definitely enjoyed my undergrad years in NIE, there were modules covering different fields of mathematics, and we had the freedom to pursue what caught our interest. The modules deepened my understanding and led me to grow in appreciation for the subject. Furthermore, the professors here are always quick to help and are really nurturing and supportive, truly demonstrating what it means to be an educator. Their encouragement really pushed me to pursue excellence in all that I do.

There are plenty of opportunities and experiences that NIE provides too, many of which I count myself lucky to have had – Service learning trip to Bhutan, STEM trip to Chicago and learning trip in Switzerland, just to name a few! Being around like-minded individuals with the heart for the future generations made my time really wholesome!

*Queenie Chiu (graduated from the BSc(Ed) programme, then from the Masters (Mathematics) programme at Warwick University, UK)*

"Learning in NIE has truly been an enriching experience, with modules on curriculum studies to equip us with pedagogical skills and academic subjects to deepen our content knowledge. We had the opportunity to undertake independent research projects in both mathematics (pure/applied) and mathematics education. The professors are knowledgeable in their content area and are skillful in explaining theoretical concepts in detail to deepen our understanding and extend our learning. With the privilege of a small class size, we could always clarify any questions and have open, extensive discussions... The support and encouragement from like-minded peers and committed professors have made my NIE journey fulfilling and prepared me to be a confident Mathematics educator."

*Lee Zi Xuan (graduated from the BSc(Ed) programme, then from the Masters programme at Imperial College, London)*

"One of the standout features of learning in NIE is the small class size, which provided me with the opportunity to develop strong bonds and learn collaboratively with my peers. To support us through our 4 years, we were assigned academic advisors from MME, who were patient and caring professors with a genuine interest in our well-being and learning. Even though some of the modules were challenging, the professors and my peers formed a supportive environment which helped me to develop my content mastery in an effective manner.

The professors from MME were structured and organised in their teaching, and we were given a sufficient level of autonomy to choose our preferred Mathematics modules based on our interests. The integration between content and pedagogy, along with the emphasis on problem-solving, created a comprehensive learning experience that has prepared me well for my future of teaching mathematics in schools. Overall, the modules offered by MME were challenging but rewarding - I am very grateful for the skills, knowledge, and experiences gained during my time in NIE."

*Chew Wei Sheng (graduate BSc (Mathematics & Computational Thinking and Education) programme, recipient of the Lee Kuan Yew Gold Medal)*

"In NIE, you will be surrounded by extraordinary professors who genuinely care about you and will guide you through your journey to becoming a great teacher. Classes in NIE are generally small, hence we are able to receive personalized attention from the professors and engage in interesting and in-depth discussions about the subject matter during lessons. The professors in NIE are incredibly knowledgeable and passionate about their teaching subjects and are always available when you need additional instructional help outside class. With dedicated professors and like-minded classmates, NIE provides a great learning environment for aspiring teachers."

*Liang Wileen (graduated from the BSc(Ed) Programme before going on to teach at North Spring Primary School)*

"The wide coverage in different areas of mathematics and the in-depth learning of each module has allowed me to develop a strong foundation and passion for mathematics. To guide us in our journey to become competent teachers, we had engaging and enriching courses in mathematics education that provided us with the necessary pedagogical skills. I was constantly impressed by the knowledgeable and encouraging lecturers who would provide consultations and advice when we needed help. Their passion and dedication for both mathematics and education are truly inspiring. My journey in NIE has made me a better educator and cultivated my love for mathematics."

*Macy Koh (graduate of the BSc (Ed) Programme)*

The lecturers and professors make the effort to get to know us better and go the extra mile to help us outside of the classroom. Their approachable nature, passion in their specialised areas, and their interesting pedagogies used during lessons ensured an enjoyable and experiential journey in NIE for me."

*Daneesh Akbar Bin Mohd Azman (graduate of the BSc (Ed) Programme)*