PrINCIPAL’S MESSAGE

Dynamic Possibilities Unleashed!

At MI, we pride ourselves as an Institute of opportunities, where students are provided with various platforms to engage, explore and experience learning and growth, so as to achieve their aspirations in a world that is growing increasingly more volatile, uncertain, complex and ambiguous. When the journey gets tough and turbulent, the Institute’s core values of Integrity, Responsibility, Respect and Resilience will be their internal compass.

We are also proud to be an Institute of excellence with a unique business focus. Our future-oriented curriculum and holistic teaching and learning framework will develop in students a spirit of innovation and enterprise, as well as the emerging 21st century competencies.

Yes, we have our own success stories. Many of our students enrol in the local autonomous universities, just like students in the junior colleges and integrated programme schools. Almost all are also eligible to join private universities locally and overseas. Some students have won scholarships and others have graduated from the NUS University Scholars Programme.

Check us out as you navigate your way around our website. Come visit us at our campus. Let us help you chart your journey towards your aspiration with greater autonomy, mastery and purpose!

Tan Wan Yu  
Principal, Millennia Institute
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*Information is accurate as at December 2017*
OUR MISSION
Nurture Talents, Achieve Success

OUR VISION
A Forward-looking Community of Learners, Thinkers and Leaders.

OUR CORE VALUES
- Integrity
- Resilience
- Respect
- Responsibility

Our mission is to nurture talents in our students to achieve success. This is done by providing a variety of programmes and opportunities which are grounded on strong core values, in partnership with our stakeholders. We premise all we do on our core values of INTEGRITY, RESILIENCE, RESPECT and RESPONSIBILITY.

We strive to provide a broad-based learning experience and space for students to pursue their passion. A wide range of subject combinations and CCAs are offered to cater to their interests and needs. Ultimately, our vision is to develop a forward-looking community of LEARNERS, THINKERS and LEADERS.
STRATEGIC THRUSTS

Quality Student Outcomes
✓ Achieving Academic Excellence
✓ Developing Future-Ready Thinkers
✓ Developing Leaders of Character and Values
✓ Creating Quality School Experiences

Engaged Professionals
✓ Developing Professionals
✓ Enhancing Staff Engagement

Effective Partnerships
✓ Establishing Strategic Partnerships for Quality Education
Local Students
All local students currently studying in secondary schools (Government, Government-Aided and Independent Schools) who are eligible for the JAE (Joint Admissions Exercise) in 2018 will receive Form A from their secondary schools on the day of the release of the Singapore-Cambridge GCE O-Level Examination results. Form A will inform a student if he or she is eligible or ineligible to pursue courses available at Millennia Institute as well as the Junior Colleges. Applications for courses under the JAE should be submitted online through the JAE Internet System (JAE-IS). Please refer to the Ministry of Education’s website for details.

• LOCAL TRANSFERS
All Singapore Citizens or Singapore Permanent Residents (SC/SPR) with valid GCE O-Level Examination results will be eligible to participate in the JAE. However, any SC/SPR who was previously admitted to a JC, MI, Polytechnic, or ITE should not apply for an institution in the same category through the JAE.

• LOCAL APPEALS
Students who have not been posted to Millennia Institute after participating in the JAE in the current year may appeal to be admitted to Millennia Institute by submitting the Admission Appeal Form available at www.millenniainstitute.moe.edu.sg.

International Students
All international students must satisfy the following admission criteria:

• AGE
International students must not exceed the correct age for admission by more than two years. The minimum age of admission to Millennia Institute is 16 years. Exceptional cases below this age will be referred to the Pupil Placement Section (PPS) of the Ministry of Education for consideration.

The usual point of admission for international students is Pre-University Year 1. Direct admission to Pre-University Year 2 and Pre-University Year 3 is not encouraged as the student would not have sufficient time to prepare for the GCE A-Level Examinations held towards the end of the year for these levels.

• PLACEMENT TESTS
International students are required to sit for the Junior College-Principals Academy Certification Test (J-PACT) to certify their proficiency in English and Mathematics before the start of the new academic year in January/February. Details of the test can be found on the website of the Principals Academy (www.pact.sg). The J-PACT results are to be submitted together with the application for admission.

Shortlisted applicants will be required to attend an interview conducted in English with the school’s Admissions Officer/Vice-Principal.

Applicants offering certain subjects will need to undergo placement tests in addition to the J-PACT admission tests. For instance, an applicant who intends to offer H2 Physics will be required to undergo a placement test for Physics. Applicants offering H2 Mathematics are required to undergo a placement test for Additional Mathematics. Applicants offering H2 Mother Tongue Language and Literature are required to undergo a proficiency test. The tests are of a comparable difficulty level to the GCE O-Level Examination. The Institute charges a fee of $44 for the first subject and $22 for every additional subject.

More details on the application procedure can be found at www.millenniainstitute.moe.edu.sg.
## FINANCIAL MATTERS

### Fees

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<th>Nationality</th>
<th>School Fees ($)</th>
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<th>2nd Tier Miscellaneous Fees ($)</th>
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### Financial Assistance

**MOE Financial Assistance Scheme**

- All applicants must be Singapore Citizens
- All applicants must be from households with a Gross Household Income of $2,500 or below per month OR Gross Per Capita Income of $625 or below per month

Successful applicants will be given:
- $750 cash;
- a waiver of school fees ($6) and standard miscellaneous fees ($13.50); and
- $120 transport credit per annum for students taking public transport

Students who do not meet the above criteria will be considered for financial assistance schemes offered by other bodies such as the Buddhist Lodge, Management Development Institute of Singapore (MDIS), Institute Advisory Committee (IAC) etc.

**NEU PC Plus Programme**

The NEU PC Plus Programme is now under Infocomm Media Development Authority (IMDA). The NEU PC Plus Programme offers students and persons with disabilities from low income households the opportunity to own a brand new computer at an affordable price. Application forms are available at the Institute library and administrative office.
**PHYSICAL FACILITIES**

**Millennia Institute**, located on the western fringes of Bukit Batok Town, sits on a vast undulating terrain covering an area of 60,000 square metres. It has a total gross floor area of 27,000 square metres and a wide range of learning facilities which include a 470-seat Auditorium, six Science Laboratories, two Lecture Theatres, a 1000-seat Stadium equipped with an eight-lane running track and an AstroTurf field. The Institute is designed to provide a conducive environment for students’ holistic learning and their all-rounded character development.

**Block A - Administration Block**

The Institute’s main Administrative Block houses the Principal’s and Vice-Principals’ offices, General Office, Heads Of Departments and Staff Rooms, library, air-conditioned learning venues and classrooms equipped with Information and Communications Technology (ICT).

The Institute’s Library has a collection of over 35,000 books and is able to comfortably accommodate about 120 students. Students can use any of the five discussion rooms located at the Library’s upper level for small-group study, discussions or project work. The Library also has two instructional rooms that can accommodate 36 students each for teaching and learning.

There are a total of four fully air-conditioned classrooms specifically designed for learning through ICT and one classroom for Audiovisual Projection.

**Block B - Students’ Activity Centre**

The hub of visual and performing arts is located at the Block B Students’ Activities Centre.

The Auditorium, Art Gallery, Drama, Music, Dance Rooms and Fitness Gym are brought together in the same building to synergise and foster an environment that promotes the arts and students’ co-curricular activities.

The Institute’s Bookshop is located at Block B.

The Fitness Gym is fully equipped with up-to-date fitness workout machines complemented by a full range of barbells and dumbbells.
Block C - Canteen Block
Block C houses the Multi-Purpose Hall, air-conditioned learning venues and the Canteen.

The Institute’s Multi-Purpose Hall is the primary venue for the Institute’s assembly programmes and examinations. It is fully air-conditioned and can also be converted into four indoor badminton courts. Located below the Hall, the Institute’s Canteen has eight stalls offering a wide variety of reasonably-priced Asian fare.

The Student Council room is located at the Canteen Level.

Block D - Tutorial Block
The Tutorial Block is the fulcrum where most learning activities take place. It houses a total of 40 conventional classrooms and two 170-seat Lecture Theatres.

Block E - Science Block
The Science Block houses two Physics, two Biology and two Chemistry Laboratories, all of which are fully equipped.

Block F – Multipurpose Block
The Multipurpose Block houses six new classrooms, each unique in their designs.

Sports Facilities
The centrepiece of the Institute’s first class sports facilities is the purpose-built stadium equipped with a FIFA Two-Star AstroTurf field and an eight-lane running track. The stadium also has a mini hockey pitch and an outdoor fitness corner. Apart from the stadium, the Institute has two basketball courts, two full-sized tennis courts and one half-sized tennis court for self-practice.

Carpark Facilities
The entire institute is able to accommodate 130 cars.
Millennia Institute seeks to be a place of opportunity for students to establish a connection between what is happening in the real world and learning within the classrooms. Our vision to establish a forward-looking community of Learners, Thinkers and Leaders underpins how we organise campus life at MI.

**Learners**
MI offers students a place to develop cognitive competencies necessary and relevant for future university studies and employment, moving beyond academic mastery. We want our learners to develop a passion for life and for learning, and to understand that learning does not stop at formal education. We aim to motivate the students and equip them with the necessary attitudes and strategies for lifelong learning, so they can direct their own learning after they have graduated from the Institute.

**Thinkers**
Beyond the classroom learning of academic subjects, the Institute believes that a student should be provided with experiences and opportunities that allow them to become future-ready thinkers who are prepared to succeed not just in the university, but also in the globalised workplace. To this end, MI seeks to develop students’ 21st Century Competencies through the full curriculum, so that students become critical and inventive thinkers who can connect their ideas and learning to new contexts beyond the classroom. MI seeks to inculcate creativity and an innovative mindset in our students through programmes that foster the spirit of entrepreneurship. Our teachers also work closely with parents and the community to provide learning environments for students to grow holistically in order to fulfil their potential.

**Leaders**
Students at MI are moulded to be leaders of good character and strong values. Through infusing leadership development intentionally in all that we do, students learn self-leadership by embracing and exhibiting the Institute’s core values and by developing positive Habits of Mind for good performance and development of character. When students put these values and habits into action in their academic pursuits and beyond, they achieve personal growth, self-mastery and personal effectiveness. We believe that every MI student can be developed as a leader who will contribute positively to society, and every MI student should be developed as a leader of the self, team and community.

**Key Programmes**
Some of the key programmes that provide the above experience and opportunities include:
- Character and Citizenship Education (CCE)
- Education and Career Guidance (ECG)
- SkillsFuture Programme
- MI.World Programme
- Innovation and Enterprise (I&E) Programme
- Leadership Development Programme

Information is accurate as at December 2017

Millennia Institute
OVERVIEW

The character development of every child is critical in nurturing them to be responsible and concerned citizens of Singapore. It is with this emphasis on character and citizenship development that the Institute aims to instil sound values and build competencies in students, and promote activism for social and/or environmental causes in Singapore and beyond.

Programme Objectives

The Character and Citizenship Education Programme aims to inculcate values and build competencies in our students to:
• Make responsible decisions and choices amidst the complexity and ambiguity of the current global environment;
• Be purposeful in the pursuit of their education, career and life goals;
• Seek to understand and appreciate multiple perspectives;
• Be resilient, adaptable and optimistic in the face of adversity;
• Demonstrate social responsibility and make meaningful contributions to the community by leading through service; and
• Be proud Singaporeans who are committed to building the future of Singapore and who understand Singapore’s role in the world.

Alignment to Strategic Thrusts and Institute Values

Strategic Thrust 1: Quality Student Outcomes
• To develop Character, Sound Values, Civic Literacy, Global Awareness and Cross-Cultural Skills.

Institute Core Values:
To develop positive Habits of Mind for inculcation of performance character and active citizenry, the Institute provides a range of experiences and sets of skills and knowledge that aim to nurture students to be confident leaders and active citizens with integrity, respect, responsibility and resilience.

Key Components in Programme
• Character and Citizenship Education Lessons
• Values in Action (VIA) Programme
  - Structured Local VIA Programme, Overseas VIA Projects and Student-initiated VIA Projects
• National Education (NE) Programme
  - Commemoration of NE events
  - Experiential Learning Journeys
  - Dialogues with senior civil servants and office holders

Character and Citizenship Education Lessons

One hour a week is set aside, during curriculum time, as the Home Tutor Period (HTP) to teach Values, Knowledge and Skills for Character and Citizenship. A progressive approach is adopted in planning the HTP schedule to meet the differing needs of our students over the three years. Lessons cover values, Socio-Emotional Learning skills, Sexuality Education, Education and Career Guidance, Cyber Wellness, National Education as well as planning and reflections for Values in Action activities and projects.

Values In Action Programme (VIA)

A structured Values in Action (VIA) Programme and Overseas VIA (OVIA) Programmes are key platforms of the VIA programme that encourage the spirit of volunteerism and activism among students, as well as help to foster civic responsibility and cross-cultural literacy skills. Through these learning experiences, students develop their self-management, social awareness and relationship management skills, and demonstrate the Institute’s core values of Integrity, Respect, Responsibility and Resilience.
Key Highlights

Values In Action Programme (VIA) Programme

• Structured local VIA Programme
All students will participate in a class-based Values in Action project on the annual Institute Values in Action Day. Based on the Service-Learning framework, students will acquire the knowledge and skills to propose and implement plans to meet needs in their community through their Values in Action project. Guidance and support from Home Tutors and teachers in the VIA Committee are provided during this journey. Past projects include a Housing & Development Board (HDB) Estate Outreach on the importance of recycling and water conservation, and student-initiated VIA projects to various welfare organisations.

• Student-initiated VIA Projects
To provide ownership, engagement and empowerment, students are encouraged to champion and lead in community involvement and environmental projects. This promotes student activism for social and environmental causes that improve the lives of others. Past projects included a mentoring programme at Princess Elizabeth Primary School, helping and befriending the elderly at Project Refresh, in collaboration with Young NTUC, and fund-raising for a cause as part of the annual Citi-YMCA Youth for Causes, 2017.

National Education (NE) Programme

• Commemoration of NE events
The commemoration of the four core NE events (Total Defence Day, International Friendship Day, Racial Harmony Day and National Day) are based on four defining moments of Singapore history. Such commemoration promote multicultural and social awareness among students, so as to nurture them into responsible citizens who are rooted to Singapore and committed to family.

• Experiential Learning Journeys and Dialogue Sessions
The visits to Parliament while it is in session, Dialogue Sessions with office holders or senior civil servants and Experiential Learning Journeys aim to deepen students’ understanding of Singapore’s policies and practices. These help students to better understand and appreciate how Singapore has overcome her constraints to achieve First World standing, as well as her current achievements and challenges.

• Overseas VIA
The Institute has, over the years, embarked on various OVIa projects to countries such as Indonesia, Thailand, Cambodia and the Philippines. The OVIa Programme provides a platform for students to engage with communities beyond the local context and to reflect on pressing community, national and global issues. It also imbues in students a sense of social responsibility and sense of appreciation for Singapore through actively contributing to the improvement of lives of others in the region.
Another core component of Character and Citizenship education in MI is Education and Career Guidance (ECG). A variety of experiences, such as My Roadmap to Success, Job Experience Programme, and interaction with professionals from different fields, are designed for our students to obtain a better understanding of self as well as more information about available pathways. These experiences also support students in strengthening their sense of purpose while making informed decisions for future education and career paths.

**My Roadmap to Success**
In MI, Home Tutors guide students to reflect upon and develop a deeper understanding of their career interests, abilities and values through our My Roadmap to Success Programme. Students work out their career goals and learn more about the skills needed to get the jobs they want. Students find out about the academic and student development opportunities available and draw up a roadmap for themselves to make the most of their stint with MI so that they are better positioned to achieve their aspirations.

**Career Guidance Related Electives during GAP Week**
Students will experience a week of electives in non-academic areas during the GAP Week. Programmes for career guidance include core modules like ‘My Lifestyle, My Choice’ which exposes students to the cost of living in Singapore and how their career decisions will affect their lifestyle choices in future. Other optional electives on ‘Personal Profiling’ and ‘Interview Skills’ contribute to the holistic development of students and equip students with skills that are generally sought for at the workplace.

**Job Experience Programme**
The Institute strives to inculcate the correct workplace ethics and a strong drive for excellence among students to prepare them for the future.

The school establishes partnerships with external organisations to offer attachment opportunities for students to see how the values and curricular concepts they encounter in school are applied in the working world. Students will also be guided in areas such as job application, interview skills as well as reflection of their learning from the experience.

**Further Education and Career Fair**
Several Institutes of Higher Learning (IHLs) such as the National University of Singapore (NUS), Nanyang Technological University (NTU), Singapore Management University (SMU) and Singapore University of Social Sciences (SUSS), as well as employers like Singapore Police Force, Singapore Armed Forces and Building and Construction Authority will be on hand to offer advice to students as well as conduct presentations about application procedures and what to expect should our students choose to join these institutions. Students are provided with up-to-date information about academic and career options from the institutions and organisations themselves. This further serves to motivate students by providing them with a sense of purpose in striving towards their education and career aspirations.
IHL and Career Fair: Students browsing the booths of the various Institutes of Higher Learning and employers
THE YEAR HEAD SYSTEM

OVERVIEW
Introduced in 2015, the Year Head System serves to enhance the Institute’s ability to deliver a student-centric and values-driven education and create a quality school experience.

The team, comprising the Year Heads and Assistant Year Heads, works with the staff to ensure that the needs of the students are addressed and to promote better student engagement and learning. The Year Head team supports Home Tutors in providing strong socio-emotional support for students. The team also engages students directly to address their needs and seek their feedback.

The Year Heads, assisted by at least one other Assistant Year Head, each take charge of a cohort.

The Year Heads also oversee all programmes and matters relating to the holistic development of the students across the three different levels.

**Level focus**
- Pre University 1: Transitioning into MI
- Pre University 2: Exploring and Experiencing Leadership
- Pre University 3: Preparing for University/World of Work

**Alignment To Strategic Thrust & Institute Values**

**Strategic Thrust 1: Quality Student Outcomes:**
- To improve admission rate of the students to the local autonomous universities.
- To develop positive habits of mind for academic success.
- To embrace and exhibit the Institute’s core values.
- To grow the students’ leadership competencies.
- To strengthen school pride and affiliation.

**Institute Core Values:**
- Respect, Resilience, Responsibility and Integrity

**Areas of focus**
In delivering a student-centric and values-driven education, the role of the Year Heads is focussed on:

1) **Academic Target Setting, Reviewing and Monitoring**
Millennia Institute believes that all students should be focussed in striving for academic excellence and preparing themselves for tertiary education. Using the MI Journal, students set their own targets for their subjects and devise their action plan to achieve these targets for the internal tests/examinations that lead to the A-Levels. Students also do reflections on their examination performance and revisit the targets which they have set.

At the school level, the cohort academic performances are reviewed and shared with the students after each examination. Year Heads would then monitor and follow-up with different groups of students based on their overall performance for the examinations. This is complemented by the mentoring by the Subject Tutors.

2) **Mentoring and Facilitating Socio-Emotional (SE) Learning**
Millennia Institute recognises the importance of developing the students’ social-emotional competencies of Self-awareness, Self-Management, Social Awareness, Responsible Decision Making and Relationship Building.

As each student’s SE learning is unique, Home Tutors mentor and facilitate SE learning through individual and small-group pastoral care and mentoring sessions. This is complemented by the Year Heads’ dialogues and feedback sessions with the students about their needs/expectations. Year Heads also create opportunities for students to exercise their leadership and further develop their SE competencies. Year Heads continually engage the students to co-create memorable school experiences through their involvement in level and school programmes and activities.

3) **Student Self-Management**
Year Heads, together with the Home Tutors, work with the Student Management team to guide and educate students on the importance of self-management with regard to adherence to and respect for the Institute rules.

Millennia Institute’s Core Values of Respect, Resilience, Responsibility and Integrity form the basis of the Institute’s rules. These rules aim to set a standard of behaviour expected of all students to maintain a conducive environment for learning and live out the Institute’s values.
SKILLSFUTURE PROGRAMME

OVERVIEW
The MI SkillsFuture Programme (SFP) is a school-based programme designed for all levels of students, in light of the national movement of SkillsFuture and the need to develop specific competencies for the 21st century. Students will complete key modules in each of the three years in the Institute. In developing future-ready thinkers, SFP modules are designed such that students would have the opportunities to acquire the growth mindset, critical thinking and communication skills for the 21st century world.

Programme Objectives
SkillsFuture Programme aims to help students:
• Develop the motivation and foundational learning skills for life-long learning, such as critical thinking skills, communication skills, collaborative skills and information skills;
• Provide a common platform for the deepening and transfer of these skills to academic subjects and non-academic areas; and
• Enable students to make informed decisions about their career and learning pathways.

Alignment to Strategic Thrusts and Institute Values

Strategic Thrust 1: Quality Student Outcomes
• To achieve academic excellence to gain admission to local autonomous universities. Students develop critical and inventive thinking, academic skills, learning strategies and a growth mindset necessary to cope with the rigorous demands of the A-Level curriculum.

Institute Core Values:
• Responsibility - Students learn to take responsibility for their own learning.
• Resilience - Students learn to work persistently to achieve their goals even under challenging circumstances.

Key Components in Programme at each level

<table>
<thead>
<tr>
<th>Level</th>
<th>SFP Module</th>
</tr>
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</table>
| PU1   | Growth Mindset with note-taking strategies  

Critical Thinking using the Paul’s Reasoning Model  

Reading using Critical Thinking skills and analysis |
| PU2   | Communication and Information Literacy: Information and Presentation Skills |
| PU3   | Education and Career Guidance: Understanding university landscape, Forums with working professionals from different fields, Teachers’ Forum, Learning Journeys, Career and University Talks |

Curriculum time is allocated for weekly SFP sessions. At PU1, students doing the Growing Our Intelligence module will develop knowledge about how the brain works and acquire note-taking skills. They will also learn about tools for critical thinking as well use these skills to aid them in reading to internalise and process information in a more critical and analytical manner. At PU2, students will learn presentation skills and develop information literacy. At PU3, to help graduating students make informed decisions about career and learning pathways, teachers’ forum, learning journeys, career and university talks will be held during SFP periods. Platforms will also be given to PU3 students to sign up for additional talks and learning journeys related to their choice career and universities.

Information is accurate as at December 2017
Key Highlights
There are four key modules in the SkillsFuture Programme, with different key learning areas and three targeted levels of attainment over three years. Students will be given repeated practice across their three years in MI using different content areas.

The four modules cover these areas:
1) growth mindset and academic learning skills;
2) critical and inventive thinking; and
3) communication, collaboration and information skills;

• Learning Experiences
The lessons for SFP are deliberately designed to actively engage students in developing an understanding of big ideas, and the application of 21st century skills. Students will have multiple opportunities to transfer learning from SFP to their subject areas. Teachers will also continually help students to make connections between ideas and skills learnt in SFP to authentic experiences in their subject areas. Lessons are also designed to incorporate various strategies to assess students’ understanding, as well as for students to partake in peer- and self-assessment.
OVERVIEW
The Internationalisation Programme, Mi.World, was conceptualised in 2008 to equip MI students with a global perspective. These educational overseas trips allow students to experience authentic learning beyond geographical boundaries, network with their peers overseas and enable them to make connections between what they learnt in the classroom and the real world. To expose students to community work and service-learning, the Overseas Values In Action (OVIA) programme forms a complementary component in the Institute’s Internationalisation Programme.

With globalisation, the need to possess multi-cultural literacy skills is important and the driving force behind Mi.World is experiential learning. As such, the knowledge, skills and values imparted to our students are central in the planning of Mi.World trips. This structured reflective learning is in tandem with our Institute’s strategic thrust of developing Future-Ready Thinkers through developing global awareness and cross-cultural skills in all Millennials. It also allows our students to develop an awareness of Singapore’s position and place in the global arena and be better equipped to be ambassadors of the Institute and of Singapore.

We envision our students to possess the relevant skills to interact and engage with a network of peers across geographical boundaries beyond their time in MI.

Programme Objectives
With globalisation, the need to possess multi-cultural literacy is important and Mi.World was conceptualised to develop in students a greater awareness about the world around them through:

- Educational and Immersion Programmes
- Learning Journeys

Key Components in Programme

- Reflective learning
  To formalise their learning, students are required to pen their reflections about their trip on a daily basis. They should highlight what they have learnt about the host country with regard to its culture, language, lifestyle and aspirations. Students should also include how the trip has influenced their perceptions about their own country and its place in a globalised world.

- Cultural appreciation and understanding
  The best way to learn is not just to read or listen but to experience and be immersed. Hence, students are given opportunities to interact with citizens of the countries they visit, and experience their ways of life. Such interactions will develop students’ understanding and perceptions of another country, and also develop in them a desire to contribute to the well-being of the international community.

Alignment to Strategic Thrusts and Institute Values

Strategic Thrust 1: Quality Student Outcomes
- To develop Civic Literacy, Global Awareness and Cross-Cultural Skills.

Institute Core Values:
- Responsibility
- Respect
China, Suzhou Trip: Entrepreneurship Seminar at National University of Singapore Research Institute (NUSRI) in Suzhou.

China, Suzhou Trip: Business proposal presentation by MI students at NUSRI.

Italy Trip: MI.WORLD exchange programme with students from ITIS Collefero in Italy, Rome.

Vietnam Trip: Student discussion at Vietnam University in Hanoi, Faculty of Tourism Studies.
OVERVIEW

The Innovation and Enterprise (I&E) Programme promotes critical and inventive thinking, as well as the spirit and culture of innovation and enterprise. Activities are designed to develop thinking skills in students and to encourage students to become resourceful and adaptable in finding unique solutions to problems, and this is made possible when students begin to have a strong sense of empathy for the users of the products or services. Equipped with these important skills and competencies, it is hoped that students will not hesitate to take calculated risks to increase their chances of success in their ventures. These skills and competencies will provide students with a competitive edge that will enable them to thrive in a dynamic and rapidly changing global landscape.

Programme Objectives

The Innovation and Enterprise (I&E) Programme aims to:
- Encourage students to develop innovative and entrepreneurial ideas through authentic learning experiences;
- Imbue students with the zeal to seize opportunities in the marketplace;
- Engage students in entrepreneurial risk taking and learning from failure;
- Raise awareness of social causes among students.

Alignment to Strategic Thrusts and Institute Values

Strategic Thrust 1: Quality Student Outcomes
To develop future-ready thinkers.
- Students develop critical and inventive thinking skills by working on innovative and entrepreneurial ideas.

Institute Core Values:
- Resilience - Students learn to work to achieve their goals even under challenging circumstances.
- Respect - Students learn to value each other’s points of view.
- Responsibility - Students learn to be responsible for achieving their aspirations and building meaningful relationships with others.

Key Components in Programme

- **Awareness Segment**
  Assembly talks and workshops are conducted to introduce students to the I&E Programme and to equip students with financial literacy.

- **Enterprise Segment**
  PU1 students conduct market research and communicate their findings as part of the Business Proposal Challenge. Students subsequently present their proposals and test their strategies by taking part in MI Mart.

- **Innovation Segment**
  PU1 students acquire product innovation techniques and use them to generate unique product ideas. Teams with the best ideas will take part in the MI Innovative Product Challenge.

- **Project Management**
  Good and viable projects will be given guidance in the making of prototypes and will be earmarked for further development and submission for external competitions.
**Key Highlights**

**• Design Thinking and its Applications**
A Design Thinking workshop aimed at developing innovative and creative thinking is organised for all PU1 students. They are exposed to Design Thinking processes, such as: explore, discern, ideate, prototype and test. Through the workshop, students will understand that an important aspect of designing is developing empathy for the product users. After the workshop, students will form groups and use their Design Thinking skills to contribute ideas towards school improvement projects or projects with social causes, including green initiatives. The proposals could be about social innovation or social entrepreneurship. If the project is social-entrepreneurial in nature, the students could actualise it by taking part in MI Mart, a flea mart.

PU2 students will apply Design Thinking skills in their Project Work. Students will be encouraged to use these tools whenever opportunities arise in their CCAs and class projects.

**• Inter-House MI Ideas**
The main purpose of this project is to encourage inventive thinking and solution-finding. Students are encouraged to offer suggestions on ways to improve school programmes. Apart from the opportunities to exercise and demonstrate their inventive skills, students develop a greater sense of belonging to the houses and take greater ownership in school improvement.

**• Entrepreneurship Challenge**
This is a competition that enhances students’ business literacy skills and simulates decision-making processes as entrepreneurs.

**• MI Social Bazaar**
The MI Social Bazaar is a student-run bazaar organised by the Entrepreneurship Club that aims to raise funds for charity while promoting the entrepreneurial spirit amongst the students.

**Key Achievements**
- National Cashflow Competitions: 2014 (eight Finalists), 2015 (two Semi-Finalists), 2016 (2nd Prize), 2017 (3rd Prize)
- HDB Cool Ideas Students’ Design Competitions: 2014 (2nd Prize), 2016 (3rd Prize)
- JRStartathon: 2016 (3rd Prize), 2017 (Most Socially Impactful Entrepreneur Award and Special Mention)
- West Zone Students’ Science Symposium: 2016 (Innovation Award)
- SMU Youth Innovation Challenge: 2017 (Best Innovation Technology Award)
- MOE ExCEL Fest Buildathon: 2017 (2nd Prize and People's Choice Award)
OVERVIEW

Inculcating values and guiding principles in students are the duties of each and every one of us. In MI, we believe that every student can be developed as leaders who contribute positively to the society. With that in mind, we adopt the Social Change Model (Astin, 1994) to facilitate positive social change in the Institute or in the community. It grooms leaders who may not hold traditional roles of leadership but are able to lead positive change. This is in alignment with the school’s vision of developing Leaders of values and character and the CCE focus of making a difference.

Students go through differentiated levels of training and mentoring to prepare them for different levels of leadership responsibilities. As part of the developmental process, students are given opportunities to take up formal and ad-hoc appointments. Formative feedback is also provided through an assessment tool administered by teachers.

Programme Objectives

The vision behind our work in developing students as leaders is to develop within them 21st Century Competencies. Students go through a self-reflective journey to understand what is involved in leadership, and to assess and develop their own abilities. They grow to be more confident and ready to be leaders of today and tomorrow.

Alignment to Strategic Thrusts and Institute Values

Strategic Thrust 1: Quality Student Outcomes
- To develop Leaders of Character and Values.

Institute Core Values:
- Respect
- Resilience
- Responsibility
- Integrity

Key Components in Programme

This diagram depicts the various foci over three years of a student’s development in MI.

Self Leadership sets the foundation for developing leadership potential by focusing on self-mastery and personal effectiveness. It entails developing in students the desire, confidence and capacity to take ownership of one’s own growth and learning based on a keen knowledge of self.

Team Leadership focusses on developing the students’ social skill of influence such that they are able to lead others with competence and care. A successful team leader strikes a good balance between being people-oriented and task-oriented; he or she inspires productive team performance towards a common goal, by enabling members to see how they can collaborate and contribute meaningfully to the task.

Community and Citizen Leadership focuses on honing students’ capacities to influence and create value through quality insight and innovation, particularly through making a positive change to society. Students are expected to be able to apply fresh perspectives to authentic tasks that are critical to achieving positive outcomes for the community.
LEADERSHIP DEVELOPMENT

Key Highlights

Student leaders in MI
- Every MI student
- Class Committee members
- House Leaders
- CCA leaders
- Councillors

• Council Camp & Senate
One objective of the leadership training programme is to better students’ skills to lead and influence the student body positively. This is conducted and facilitated by PU2 councillors for PU1 interns through the experiential learning activities. The focus is to develop in students skills and competencies in the domain of Team Leadership.

The Senate comprises of student leaders from all CCAs, all councillors, House captains and level representatives. The purpose of the senate is to encourage the Institute’s Student Leaders to be active Learners, Thinkers and Leaders, by working collectively with the student body to achieve a common goal of enhancing our school culture.

• MI House
The 4 Houses in MI are GARNET, ONYX, SAPPHIRE, ZIRCON. The house system promote healthy competition, school spirit and bonding among students. It also supports the interaction between seniors and juniors. House leaders are guided by House masters to conceptualise and organise House-based activities such as Transcendence, MI Play Fiesta, etc.

• Student Leaders’ Overseas Camp
The annual five-day, four-night camp in Gopeng, Malaysia, targets potential CCA leaders and exposes them to experiential activities and cultural exchange with a partner school. This aims to develop leadership competencies and 21st Century Competencies, specifically the ability to manage complexities and ambiguities, and communicate and collaborate effectively. Students engage in outdoor team building activities to strengthen their teamwork, communication and management skills. After the trip, students extend their learning when they apply these skills in planning and executing their CCA action plans.

• Student-Initiated School Activities
Platforms are provided for student leaders at the school level and beyond, to develop and hone their leadership skills through engagement in authentic projects. Student leaders are guided by teacher-mentors to conceptualise and organise school activities and events such as Orientation, A-Division Cheering, Teachers’ Day, Total Defence Day, and National Day. Other opportunities to develop students as community and citizen leaders include participation in the Keep Singapore Clean movement and the National Day Parade.

Information is accurate as at December 2017
Students read the following subjects at H1 and H2 levels for the GCE A-Level curriculum:

<table>
<thead>
<tr>
<th>3 H2 content-based subjects</th>
<th>H1 content-based subject</th>
<th>Students are required to read</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 H1 content-based subject</td>
<td>H1 Mother Tongue Language (MTL)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H1 General Paper (GP)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H1 Project Work (PW)</td>
<td>3 H2 + 1 H1 + MTL + GP + PW</td>
</tr>
</tbody>
</table>

*At least one H1 or H2 subject from a contrasting discipline.*

Project Work (PW) and General Paper (GP) are compulsory H1 subjects. All subject combinations must include one contrasting subject, taken either at H1 or H2 Level.

A contrasting subject is a content-based subject taken outside a student’s main area of specialisation. The contrasting subject helps to broaden learning in order to prepare a student to do multi-disciplinary courses in the university. Contrasting subjects can be offered at H1 or H2 levels. All subjects taught in the Institute, excluding General Paper, Mother Tongue and Project Work, are categorised into either the Arts or Science disciplines according to the following table:

<table>
<thead>
<tr>
<th>Discipline / Level</th>
<th>H1</th>
<th>H2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts</td>
<td>Art Economics Geography History Literature in English China Studies in English General Studies in Chinese</td>
<td>Art Economics Management of Business Geography History Literature in English Chinese Language &amp; Literature Malay Language &amp; Literature Tamil Language &amp; Literature</td>
</tr>
<tr>
<td>Science</td>
<td>Biology Chemistry Physics Mathematics</td>
<td>Biology Chemistry Physics Mathematics Principles of Accounting</td>
</tr>
</tbody>
</table>

Examples:
A science student offering three H2 Science subjects, Chemistry, Physics and Mathematics, should offer a contrasting Arts subject such as H1 Economics.

Students are not allowed to offer subject combinations that are without a contrasting subject. For example, the following combination is not allowed:

H2 subjects: Accounting, Chemistry, Mathematics with H1 subject Biology => All Science, no Arts discipline

At Millennia Institute, students sit for the A-Level Examination for the following subjects at different years:

<table>
<thead>
<tr>
<th>PU1</th>
<th>PU2</th>
<th>PU3</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 MTL (students must meet prerequisite)</td>
<td>PW, H1 Content and H1 MTL</td>
<td>3H2 and GP</td>
</tr>
</tbody>
</table>

Information is accurate as at December 2017
## SUBJECT PREREQUISITES

### GCE O-Level Subject Prerequisites

*Note: Subjects not shown in the table below have no prerequisites.*

<table>
<thead>
<tr>
<th>Subject</th>
<th>H1</th>
<th>H2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MATHEMATICS AND SCIENCES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mathematics</td>
<td>No Prerequisite</td>
<td>Achieved at least C6 in Additional Mathematics for Arts and Commerce students</td>
</tr>
<tr>
<td>Biology</td>
<td>Read Pure Biology or achieved at least C6 in Combined Science (Phy/Bio or Bio/Chem)</td>
<td>Achieved at least C6 in Pure Biology or achieved at least B4 in Combined Science (Phy/Bio or Bio/Chem)*</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Read Pure Chemistry or achieved at least C6 in Combined Science (Phy/Chem or Bio/Chem)</td>
<td>Achieved at least C6 in Pure Chemistry or achieved at least B4 in Combined Science (Phy/Chem or Bio/Chem)*</td>
</tr>
<tr>
<td>Physics</td>
<td>Read Pure Physics or achieved at least C6 in Combined Science (Phy/Bio or Phy/Chem)</td>
<td>Achieved at least C6 in Pure Physics or achieved at least B4 in Combined Science (Phy/Chem or Bio/Phy)*</td>
</tr>
<tr>
<td><strong>HUMANITIES AND THE ARTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literature in English</td>
<td>Read Literature or achieved at least C5 in Combined Humanities or achieved at least C5 in English</td>
<td>Read Literature at O-Level or achieved at least B3 in Combined Humanities or achieved at least B4 in English</td>
</tr>
<tr>
<td>Mother Tongue Language &amp; Literature (MTLL)</td>
<td>Not Applicable</td>
<td>Achieved at least B3 in O-Level Mother Tongue (A2 &amp; B3 students to pass proficiency test) or achieved at least C6 in Higher Mother Tongue.</td>
</tr>
<tr>
<td>General Studies in Chinese (GSC) (<em>read additional notes below</em>)</td>
<td>(i) At least a C6 in O-Level Higher Chinese or (ii) A1 for GCE O-Level Chinese Language and must obtain at least an E grade or better for H1 Chinese Language at the GCE A-Level</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

*Note:*

^ For Science subject combinations S101 & S102: Students who read Combined Science ONLY at O-Level and wish to offer two H2 science subjects must achieve at least B3 in the subject with relevant components.

*Students who obtained A2 in Chinese Language at GCE O-Level Examination will have to take a proficiency test and be assessed accordingly.*
# SUBJECT COMBINATIONS

## ARTS COMBINATIONS

<table>
<thead>
<tr>
<th>CODE</th>
<th>H2 Subjects</th>
<th>H1 Content-Based Subjects [Choose 1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>A101</td>
<td>Literature, Geography, Economics</td>
<td>Mathematics</td>
</tr>
<tr>
<td>A102</td>
<td>Literature, History, Economics</td>
<td>Mathematics</td>
</tr>
<tr>
<td>A103</td>
<td>Literature, Geography, Management</td>
<td>Mathematics</td>
</tr>
<tr>
<td>A104</td>
<td>Literature, Art, Geography</td>
<td>Mathematics</td>
</tr>
<tr>
<td>A105</td>
<td>Literature, Art, History</td>
<td>Mathematics</td>
</tr>
<tr>
<td>A106</td>
<td>Literature, History, Management</td>
<td>Mathematics</td>
</tr>
<tr>
<td>A107</td>
<td>Geography, MTLL, Management</td>
<td>Mathematics</td>
</tr>
<tr>
<td>A108</td>
<td>History, MTLL, Management</td>
<td>Mathematics</td>
</tr>
<tr>
<td>A109</td>
<td>Geography, Economics, Mathematics</td>
<td>Literature/Art/CSE*/GSC**</td>
</tr>
</tbody>
</table>

## COMMERCE COMBINATIONS

<table>
<thead>
<tr>
<th>CODE</th>
<th>H2 Subjects</th>
<th>H1 Content-Based Subjects [Choose 1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>C101</td>
<td>Management, Accounting, Mathematics</td>
<td>Economics/Geography/History/Literature/Art/CSE*/GSC**</td>
</tr>
<tr>
<td>C102</td>
<td>Management, Accounting, Economics</td>
<td>Mathematics</td>
</tr>
<tr>
<td>C103</td>
<td>Management, Accounting, History</td>
<td>Mathematics</td>
</tr>
<tr>
<td>C104</td>
<td>Management, Accounting, Geography</td>
<td>Mathematics</td>
</tr>
<tr>
<td>C105</td>
<td>Management, Economics, Mathematics</td>
<td>Geography/History/Literature/Art/CSE*/GSC**</td>
</tr>
<tr>
<td>C106</td>
<td>Management, Economics, Geography</td>
<td>Mathematics</td>
</tr>
<tr>
<td>C107</td>
<td>Management, Economics, History</td>
<td>Mathematics</td>
</tr>
<tr>
<td>C108</td>
<td>Management, Economics, MTLL</td>
<td>Mathematics</td>
</tr>
<tr>
<td>C109</td>
<td>Economics, Accounting, Mathematics</td>
<td>Geography/History/Art/CSE*/GSC**</td>
</tr>
</tbody>
</table>

Note: A pass in Additional Mathematics at GCE O-Level or H1 Mathematics at GCE A-Level is a prerequisite to gaining admission to Business courses at local universities (e.g. Business Administration, Accountancy).

## SCIENCE COMBINATIONS

<table>
<thead>
<tr>
<th>CODE</th>
<th>H2 Subjects</th>
<th>H1 Content-Based Subjects [Choose 1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>S101#</td>
<td>Chemistry, Physics, Mathematics</td>
<td>Economics/Geography/History/Literature/CSE*/GSC**</td>
</tr>
<tr>
<td>S102#</td>
<td>Chemistry, Biology, Mathematics</td>
<td>Economics/Geography/History/Literature/CSE*/GSC**</td>
</tr>
<tr>
<td>S103</td>
<td>Physics, Economics, Mathematics</td>
<td>Chemistry/Biology/Geography/History/Literature/CSE*/GSC**</td>
</tr>
<tr>
<td>S104</td>
<td>Physics, Accounting, Mathematics</td>
<td>Economics/Geography/History/Literature/CSE*/GSC**</td>
</tr>
<tr>
<td>S105</td>
<td>Chemistry, Economics, Mathematics</td>
<td>Physics/Biology/Geography/History/Literature/CSE*/GSC**</td>
</tr>
<tr>
<td>S106</td>
<td>Chemistry, Accounting, Mathematics</td>
<td>Economics/Geography/History/Literature/CSE*/GSC**</td>
</tr>
<tr>
<td>S107</td>
<td>Chemistry, Mathematics, MTLL</td>
<td>Biology/Physics/Economics/Geography/History/Literature/Art/CSE*/GSC**</td>
</tr>
<tr>
<td>S108</td>
<td>Physics, Mathematics, MTLL</td>
<td>Biology/Chemistry/Economics/Geography/History/Literature/Art/CSE*/GSC**</td>
</tr>
</tbody>
</table>

Note:

- All subject combinations must include 1 contrasting subject, taken either at H1 or H2 Level.

“# Additional Prerequisites for Science Combinations S101 & S102:
Students who read Combined Science ONLY at O-Level and wish to offer two H2 science subjects must achieve at least B3 in the subject with relevant components.”

* CSE (China Studies in English)
**GSC (General Studies in Chinese)
<table>
<thead>
<tr>
<th>Course of Study</th>
<th>UNI</th>
<th>Subject Prerequisites</th>
<th>Years of Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts &amp; Social Sciences</td>
<td>NUS</td>
<td>Passes in at least 3 subjects at H2 level</td>
<td>3</td>
</tr>
<tr>
<td>Business Administration</td>
<td>NUS</td>
<td>Good overall results and at least B grade for GP or SAT1 Verbal/Critical Reading score of 580 accompanied by a minimum of grade B in O Level English, and good performance in interview and written test</td>
<td>3-4</td>
</tr>
<tr>
<td>Business Administration (Accountancy)</td>
<td>NUS</td>
<td>Candidates must meet requirements of both Law and Business Administration</td>
<td>4</td>
</tr>
<tr>
<td>Business Administration &amp; Law</td>
<td>NUS</td>
<td>Good pass in H2 Mathematics and meeting Law requirements</td>
<td>4</td>
</tr>
<tr>
<td>Business Administration with Accounting &amp; Law (Double Degree)</td>
<td>NUS</td>
<td>Passes in any two: H2 Biology, H2 Chemistry, H2 Mathematics, H2 Physics</td>
<td>4</td>
</tr>
<tr>
<td>Economics &amp; Law</td>
<td>NUS</td>
<td>Passes in H2 Chemistry, H2 Biology, and either H2 Mathematics or H2 Physics</td>
<td>3-4</td>
</tr>
<tr>
<td>Economics &amp; Law (Double Degree)</td>
<td>NUS</td>
<td></td>
<td>3-4</td>
</tr>
<tr>
<td>Life Science</td>
<td>NUS</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Science</td>
<td>NUS</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Science (Life Science)</td>
<td>NUS</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Course of Study in Local Universities for 2018 Cohort (Information correct as of Dec 2017)

Information is accurate as at December 2017
<table>
<thead>
<tr>
<th>Course of Study</th>
<th>Subject Prerequisites</th>
<th>Years of Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing (Honours)</td>
<td>H2 passes in any two of the following: Biology, Chemistry, Physics and Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>H2 passes in Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>Dentistry</td>
<td>H2 passes in Chemistry and either H2 Biology or H2 Physics; Interview and manual dexterity test</td>
<td>5</td>
</tr>
<tr>
<td>Architecture</td>
<td>H2 passes in Chemistry and either H2 Biology or H2 Physics; Good performance at interview</td>
<td>4</td>
</tr>
<tr>
<td>Industrial Design</td>
<td>H2 passes in Chemistry and either H2 Biology or H2 Physics; Good performance at interview</td>
<td>4</td>
</tr>
<tr>
<td>Project and Facilities Mgmt; Real Estate</td>
<td>H2 passes in Chemistry and either H2 Biology or H2 Physics; Good performance at interview</td>
<td>4</td>
</tr>
</tbody>
</table>

Information is accurate as at December 2017
<table>
<thead>
<tr>
<th>Course of Study</th>
<th>UNI</th>
<th>Years of Study</th>
<th>A109</th>
<th>A101 - A108 +</th>
<th>CI01/CI05/IO4/IO6/IO8 +</th>
<th>S101</th>
<th>S102</th>
<th>S103</th>
<th>S104/S108</th>
<th>S105/S107 + H1 Others</th>
<th>S106</th>
<th>Subject Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering</td>
<td>NUS</td>
<td>4</td>
<td></td>
<td></td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Pass in H2 Mathematics and H2 Physics or Chemistry (Common first year for all students; streaming after first year.) (Students w/o H1 or H2 Physics need to have O-Level Physics and will be required to do Physics bridging modules.)</td>
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<tr>
<td>1. Civil</td>
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<td>2. Electrical</td>
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<td>3. Industrial &amp; Systems Engineering</td>
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<td>4. Mechanical</td>
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<td>5. Bioengineering</td>
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<tr>
<td>6. Materials Science &amp; Engineering</td>
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<tr>
<td>7. Computer Engineering (Faculty of Engineering)</td>
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<td></td>
<td></td>
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<tr>
<td>Computer Engineering (Sch of Computing)</td>
<td>NUS</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Pass in H2 Mathematics and H2 Physics or Chemistry</td>
</tr>
<tr>
<td>Computing</td>
<td>NUS</td>
<td>3</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>Pass in H1 Mathematics</td>
</tr>
<tr>
<td>Chemical Engineering</td>
<td>NUS</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Pass in H2 Chemistry, Math and Physics</td>
</tr>
<tr>
<td>Environmental Engineering</td>
<td>NUS</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Pass in H2 Chemistry, Math and Physics</td>
</tr>
<tr>
<td>Engineering Science</td>
<td>NUS</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>Pass in H2 Mathematics and H2 Physics</td>
</tr>
<tr>
<td>Business Analytics</td>
<td>NUS</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
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Subject Prerequisites:

- (i) H1 Mathematics or O-Level Mathematics
- (ii) O-Level pass in Science subject
- Pass in H2 Mathematics
- Good pass in GP (at least B4)
- Pass in H2 Chinese Language & Literature or good O-Level pass in Chinese or good O-Level pass in Chinese or Higher Chinese
- Good pass in GP + Geography
- (i) Pass in H1 Mathematics or (ii) Add. Mathematics at O-Level
- Pass in H2 Chemistry and H1 Mathematics
- Pass in H2 Mathematics
- Pass in H2 Chemistry and H1 Mathematics

Subject Prerequisites:

- Maritime Studies:
  - (i) H1 Mathematics or O-Level Mathematics
  - (ii) O-Level pass in Science subject
  - Pass in H2 Mathematics
  - Good pass in GP (at least B4)
  - Pass in H2 Chinese Language & Literature or good O-Level pass in Chinese or good O-Level pass in Chinese or Higher Chinese
  - Good pass in GP + Geography
  - (i) Pass in H1 Mathematics or (ii) Add. Mathematics at O-Level
  - Pass in H2 Chemistry and H1 Mathematics
  - Pass in H2 Mathematics
  - Pass in H2 Chemistry and H1 Mathematics

Information is accurate as at December 2017
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**Years of Study**

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**Course of Study**

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**Subject Prerequisites**

- **Pass in H2 Physics and H1 Mathematics**
- **At least A pass in O Level Mathematics and Portfolio**
- **Pass in C-Level Language and Mathematics and Two H2 passes.**
- **Pass in C-Level Language and Mathematics.**
- **Pass in any two: Biology, Chemistry, Computing, Mathematics, Physics.**
- **Good pass in at least three H2 subjects, General Paper and PW, A good pass in Mathematics at H1 level or equivalent; A minimum of ‘S’ grade in Mother Tongue Language; SAT Reasoning (an advantage); Interview for shortlisted candidates.**
- **Excellent H2 grades, essays, interviews.**
- **Good passes in at least three H2 subjects; General Paper and PW, A good pass in Mathematics at H1 level or equivalent; A minimum of ‘S’ grade in Mother Tongue Language; Interviews and selection tests.**

**Information is accurate as at December 2017**
Subjects
All courses offered at Millennia Institute will meet most prerequisites for admission into the local autonomous universities.

Here is a list of subjects offered at Millennia Institute:

- H1 Art
- H2 Art
- H1 Biology
- H2 Biology
- H1 Chemistry
- H2 Chemistry
- H1 China Studies in English
- H2 Chinese Language and Literature
- H1 Economics
- H2 Economics
- H1 General Paper
- H1 General Studies in Chinese
- H1 Geography
- H2 Geography
- H1 History
- H2 History
- H1 Literature in English
- H2 Literature in English
- H2 Malay Language and Literature
- H2 Management of Business
- H1 Mathematics
- H2 Mathematics
- H1 Mother Tongue
- H1 Non-Tamil Indian Language and Foreign Languages (at language centres)
- Physical Education*
- H1 Physics
- H2 Physics
- H2 Principles of Accounting
- H1 Project Work
- H2 Tamil Language and Literature
- Mother Tongue (B Syllabus)

*Unless there is medical exemption, Physical Education is compulsory for all students from Pre-University Year 1 to Pre-University Year 3.

The syllabus for the A-Level subjects can be downloaded from the SEAB website: https://www.seab.gov.sg/pages/nationalExaminations/GAL/School_Candidates/2018_GCE_A.asp
The H1 Level Art syllabus is designed to provide opportunities for students at the pre-university level to broaden their engagement in the visual arts. The syllabus aims to cultivate in students a greater understanding of and sensitivity towards artworks, so as to develop a citizenry that is more able to enjoy, appreciate and foster a lifelong interest in the visual arts. Students offering the H1 Level Art syllabus will investigate artistic conventions and concepts through the study of artists and artworks. Visual literacy skills such as the perception of and response to visual images as well as the critical analysis of visual information are also developed.

Prerequisite for University Admission
H1 Art is not a mandatory prerequisite for any university course.

Course Requirements at MI
Students planning to take H1 Art need to have a strong interest in art appreciation and a reasonable command of the English Language, due to the extensive academic reading and writing requirements of the course.

Instructional Objectives
On successful completion of this subject, students should be able to:
• Make connections between visual expressions of differing genres, traditions and contexts;
• Make inferences and draw relationships between issues/problems encountered by artists and one’s own culture and experience;
• Generate, conceptualise and articulate independent interpretations of artworks;
• Critically appraise artists/ artworks and their ideas/concepts;
• Communicate with precise working vocabulary on the processes of art making and one’s responses to artworks;
• Value imaginative and innovative ideas in visual arts; and
• Value local artworks as part of a country’s history and cultural heritage.

Lesson Delivery and Expectations
Lessons for H1 Art will usually take the form of tutorials in the Art Room. An overview in the form of a concept map will be provided at the start of each new topic. Mini project works, class discussions and presentations are some regular activities in lessons. There will also be some practical art-making activities for students to help concretise their learning as well as compulsory on-site lessons conducted at art exhibition venues (e.g. museums, galleries) for experiential learning. Students will be required to read the necessary notes before lessons, and participate actively in all class discussions. Submission of any take-home assignments must be punctual, as required by the subject tutor.

Information is accurate as at December 2017
Enrichment Opportunities
H1 Art students can look forward to the following enrichment opportunities:
• Pre-University Year 1 - UOB painting competition, Art Stage, Affordable Art Fair, Singapore Biennale
• Pre-University Year 2 - Objectifs Junior Photography Competition, Creative Video Awards, UOB Painting Competition, Art Stage, Singapore Biennale

Reference and Learning Materials
There are no textbooks for H1 Art, but students will be issued relevant resources.
• Pre-University Year 1 - SOVA Resource Package and Workbook 1 (Art History, Realistic, Abstract and New Media Representation)
• Pre-University Year 2 - SOVA Resource Package and Workbook 2 (About People, Society and Culture) and condensed A-Level Preparation Package

Mode of Assessment
Students’ participation will be assessed based on their level of preparedness for class, engagement with learning, ability to apply the knowledge learnt, and the quality of discussion.

A-Level Examination
H1 Art students will sit for one compulsory written paper (8879/1) of which the duration is three hours. Each paper is divided into three sections according to the following structure:
Section A: Two structured questions, each accompanied by a visual stimulus.
Section B: Two structured comparison questions, each accompanied by a pair of visual stimuli.
Section C: Two essay questions. Students must answer one question from each section.

H1 Art students will sit for their GCE A-Level paper in PU2.

H1 Art Student Portfolio
Since H1 Art is mainly a theory-based subject, H1 Art students who express interest in pursuing an art degree (e.g. ADM, Lasalle or NAFA) which requires a portfolio submission, will be given some assistance for the preparations of the entry requirement. This will be done on a case-by-case basis.

Subject Coverage
Pre-University Year 1:
• Art History for Starters
• Realistic Representation
• Abstract Representation

Pre-University Year 2:
• New Media and About People
• About Society and Culture
The H2 Level Art syllabus is designed to provide opportunities for students at the pre-university level to broaden their engagement in the visual arts. The syllabus aims to cultivate in students a greater understanding of and sensitivity towards artworks, so as to develop a citizenry that is more able to enjoy, appreciate and foster a lifelong interest in the visual arts. Students offering the H2 Level Art syllabus will investigate artistic conventions and concepts through the study of artists and artworks. Visual literacy skills such as the perception of and response to visual images as well as the critical analysis of visual information are also developed.

Prerequisite for University Admission
H2 Art is not a mandatory prerequisite for any university course.

Course Requirements at MI
Students planning to take H2 Art need to have a strong interest in art appreciation and a reasonable command of the English Language, due to the extensive academic reading and writing requirements of the course.

Instructional Objectives
On successful completion of this subject, students should be able to:
• Develop an art portfolio that consists of a wide range of artistic media;
• Create works that are able to express themselves and comment on a larger social or cultural context;
• Make connections between visual expressions of differing genres, traditions and contexts;
• Make inferences and draw relationships between issues/problems encountered by artists and one’s own culture and experience;
• Generate, conceptualise and articulate independent interpretations of artworks;
• Critically appraise artists/artworks and their ideas/concepts;
• Communicate with precise working vocabulary on the processes of art making and one’s responses to artworks;
• Employ imaginative and innovative ideas to create works of art; and
• Create and value local artworks as part of a country’s history and cultural heritage.

Lesson Delivery and Expectations
The H2 Art curriculum in MI offers a comprehensive education in both the theory and practice of art. The programme offers exploration of traditional mediums such as drawing and painting, as well as experimental genres of photographic imaging, videos and installation art. The curriculum includes modules such as painting, photography, installation art and video making. The programme encourages innovation and experimentation in various art forms combined with a solid education in the craft. Designed to provide students with fundamentals in both the theory and practice of art, the philosophy of the programme emphasises creativity, imagination and critical thinking with the aim of giving students the conceptual and creative tools necessary for their development as artists, creative thinkers and change makers.

Lessons for H2 Art will usually take the form of studio and tutorials in a classroom setting. An overview in the form of a concept map will be provided at the start of each new topic. Mini projects, class discussions and presentations are some regular activities that take place during lessons. H2 Art students are expected to keep an Art Journal to document their creative art-making process and personal reflections. There will also be practical art-making activities for students to help concretise their learning, as well as compulsory onsite lessons conducted at art exhibition venues (such as museums and galleries) for experiential learning. Students will be required to read the necessary class notes before the lesson and participate actively in all class discussions. Submission of take-home assignments must be punctual, as required by the subject tutor.
**H2 ART (9750)**

**Enrichment Opportunities**
H2 Art students can look forward to the following enrichment opportunities:
- Pre-University Year 1 - UOB painting competition, Art Stage, Affordable Art Fair, Singapore Biennale
- Pre-University Year 2 - Objectifs Junior Photography Competition, Creative Video Awards, UOB Painting Competition, Art Stage, Singapore Biennale
- Pre-University Year 3 - Art Stage

**Reference and Learning Materials**
There are no textbooks for H2 Art, but students will be issued relevant resources.
- Pre-University Year 1 - SOVA Resource Package and Workbook 1 (Art History, Realistic, Abstract and New Media Representation)
- Pre-University Year 2 - SOVA Resource Package and Workbook 2 (About People, Society and Culture)
- Pre-University Year 3 - Condensed A-Level Preparation Package

**Mode of Assessment**
Students’ participation will be assessed based on their level of preparedness for class, engagement with learning, ability to apply the knowledge learnt, and the quality of discussion.

**A-Level Examination**
H2 Art students will sit for two papers - Paper 1 (Study of Visual Art) and Paper 2 (Coursework).

Paper 1 (Study of Visual Arts) is a compulsory 3 hour paper that is divided into three sections according to the following structure:

- **Section A:** Two structured questions, each accompanied by a visual stimulus.
- **Section B:** Two structured comparison question, each accompanied by a pair of visual stimuli.
- **Section C:** Two essay questions.

Students must answer one question from each section.

Paper 2 (Coursework) is a project unit comprising the finished artwork and not more than eight A2 sheets of preparatory studies.

**H2 Art Student Portfolio**
Each student will be required to maintain their own art portfolio which will consist of the following:
- An art blog
- A visual art diary
- A visual art portfolio

**Subject Coverage**

**Pre-University Year 1 (SOVA):**
- History of Art
- Realistic Representation
- Abstract Representation
- Introduction to New Media Representation

**Pre-University Year 2 (SOVA):**
- New Media Representation
- About People
- About Society
- A-Level Preparations

**Pre-University Year 3 (SOVA):**
- About Culture
- Review of all SOVA topics (Terms 2 - 3)
- A-Level Preparations (Students are required to attend all compulsory extra lessons and consultations)
- GCE A-Level H2 Art Paper (Late November)

**Pre-University Year 1 (STUDIO):**
- Learning to ‘See’ exercises
- UOB painting project
- Book making project
- Alternative mediums

**Pre-University Year 2 (STUDIO):**
- Installation/ Video collaborative project
- Independent self-directed project

**Pre-University Year 3 (STUDIO):**
- A-Level Coursework
H1 Biology aims to provide students with an experience that develops their interest in biology and which builds the knowledge, skills and attitudes necessary for further studies in related fields. It seeks to develop students into scientifically-literate citizens who are well-prepared for the challenges of the 21st century. Students will be equipped with the understanding, skills, ethics and attitudes relevant to the Practices of Science, and to address the broader questions of what life is and how life is sustained. H1 Biology is designed as a subset of H2 Biology. It will incorporate the products, processes and nature of science, which have been articulated in the revised H2 Biology curriculum. It is designed as a contrasting subject. The content in the H1 syllabus comprises four core ideas of biology and one extension topic that is based on the impact of important emerging biological issues in both the local and global contexts. The four core ideas are: 1) The Cell and Biomolecules of Life, 2) Genetics and Inheritance, 3) Energy and Equilibrium and 4) Biological Evolution. The extension topic is: Impact of Climate Change on Animals and Plants. Students are not required to sit for the Practical Exam.

Prerequisite for University Admission
H1 Biology is not a mandatory prerequisite for any university course.

Course Requirements at MI
Students are expected to have read Pure Biology or achieved at least C6 in Combined Science (Physics/Biology or Biology/Chemistry) at the GCE O-Levels.

Instructional Objectives
On successful completion of this subject, students should be able to:

- Demonstrate knowledge and understanding in relation to:
  - Biological phenomena, facts, laws, definitions, concepts, theories;
  - Biological vocabulary, terminology, conventions (including symbols, quantities and units);
  - Scientific instruments and apparatus used in biology, including techniques of operation and aspects of safety;
  - Scientific quantities and their determination; and
  - Biological and technological applications with their social, economic and environmental implications.

- Use written, symbolic, graphical and numerical material to:
  - Locate, select, organise and present information from a variety of sources;
  - Handle information, distinguishing the relevant from the extraneous;
  - Manipulate numbers and other forms of data, and translate information from one form to another;
  - Present reasoned explanation for phenomena, patterns and relationships;
  - Make comparisons that may include the identification of similarities and differences;
  - Analyse and evaluate information to identify patterns, report trends, draw inferences, report conclusions and construct argument;
  - Justify decisions, make predictions and propose hypotheses;
  - Apply knowledge, including principles, to novel situations;
  - Use skills, knowledge and understanding from different areas of biology to solve problems; and
  - Organise and present information, ideas and arguments clearly and coherently, using appropriate language.
Lesson Delivery and Expectations
The teaching and learning programme in MI aims to improve the scientific literacy of Biology students. The key areas of focus include mastery of content and the language of science, as well as deepening students’ practices of science. Lessons for H1 Biology will usually take the form of tutorials/lectures in a classroom setting. Classroom demonstrations, mini projects, class discussions and oral presentations feature regularly in lessons. Practical lessons are also conducted to enrich students’ learning experiences. Wherever possible, students are required to work collaboratively in teams and engage in higher order thinking. Students are expected to use ICT during lessons. Students also have access to virtual laboratory simulations to deepen their understanding of experimental techniques and scientific research design. Students are expected to read the lecture notes, complete their tutorials and workbook before lessons, and participate actively in all class discussions. Submission of take-home assignments must be punctual, as required by the subject tutor. The quality of the assignments is also considered in Continual Assessment.

Enrichment Opportunities
• Pre-University Year 1 - DNA Forensic Analysis Workshop, National Science Experiment Big Data Challenge (for selected students)
• Pre-University Year 2 - Scientific Inquiry Workshop

Reference and Learning Materials
• Resource Packages compiled by tutors

Mode of Assessment
Internal assessments include active participation, quizzes, assignments, topical tests, block tests and Promotional/Preliminary Examinations. Students will have to complete a Biology project in their first year, which will contribute to the Continual Assessment score.

A-Level Examination
H1 Biology students will sit for two written papers.

Paper 1 is of one hour duration and consists of 30 compulsory multiple-choice questions. All questions will feature four direct choice options as possible answers.

Paper 2 is of two hour duration and will include questions that assess the higher-order skills of analysing, making conclusions, evaluating information and require candidates to integrate knowledge and understanding from different areas of the syllabus. Paper 2 comprises two sections. Section A consists of a variable number of structured questions including at least one data-based or comprehension-type question, all of which are compulsory to complete. These include questions which require students to integrate knowledge and understanding from different areas of the syllabus. Section B consists of two free-response questions, of which the student will choose one. The questions require students to integrate knowledge and understanding from different parts of the syllabus.

Subject Coverage
Pre-University Year 1:
• Organelles and Cellular structures
• Biomolecules of Life and Cellular Transport
• Proteins
• Stem Cells
• The Structure of Nucleic Acids and Gene Expression
• DNA Mutations

Pre-University Year 2:
• The Cell Cycle
• Inheritance
• Transformation of Energy between the Environment and Organisms
• Natural Selection and Adaptation
• Impact of Climate Change

All students have to undergo a bridging module at the start of the course.
H2 Biology aims to provide students with an experience that develops their interest in biology and which builds the knowledge, skills and attitudes necessary for further studies in related fields. It seeks to develop students into scientifically-literate citizens who are well-prepared for the challenges of the 21st century. Students will be equipped with the understanding, skills, ethics and attitudes relevant to the Practices of Science, and to address the broader questions of what life is and how life is sustained. The content in the H2 Biology syllabus comprises of four core ideas of Biology and two extension topics. The four core ideas are: 1) The Cell and Biomolecules of Life, 2) Genetics and Inheritance, 3) Energy and Equilibrium and 4) Biological Evolution. The two extension topics are: A) Infectious Diseases and B) Impact of Climate Change on Animals and Plants. Students are also required to sit for the Practical Exam.

Prerequisite for University Admission
It is a mandatory prerequisite subject for admission to Life Sciences courses at NUS.

Course Requirements at MI
Students are expected to have achieved at least C6 in Pure Biology or B4 in Combined Science (Physics/Biology or Biology/Chemistry) at the GCE O-Levels.

Instructional Objectives
On successful completion of this subject, students should be able to:
• Demonstrate knowledge and understanding in relation to:
  • Biological phenomena, facts, laws, definitions, concepts, theories;
  • Biological vocabulary, terminology, conventions (including symbols, quantities and units);
  • Scientific instruments and apparatus used in Biology, including techniques of operation and aspects of safety;
  • Scientific quantities and their determination; and
  • Biological and technological applications with their social, economic and environmental implications.
• Use written, symbolic, graphical and numerical material to:
  • Locate, select, organise and present information from a variety of sources;
  • Handle information, distinguishing the relevant from the extraneous;
  • Manipulate numbers and other forms of data, and translate information from one form to another;
  • Present reasoned explanation for phenomena, patterns and relationships;
  • Make comparisons that may include the identification of similarities and differences;
  • Analyse and evaluate information to identify patterns, report trends, draw inferences, report conclusions and construct arguments;
  • Justify decisions, make predictions and propose hypotheses;
  • Apply knowledge, including principles, to novel situations;
  • Use skills, knowledge and understanding from different areas of Biology to solve problems; and
  • Organise and present information, ideas and arguments clearly and coherently, using appropriate language.

Students should also be able to:
• Follow a detailed sequence of instructions or apply standard techniques;
• Devise and plan investigations which may include constructing and/or testing a hypothesis and select techniques, apparatus and materials;
• Use techniques, apparatus and materials safely and effectively;
• Make and record observations and experimental data;
• Interpret and evaluate observations and experimental data; and
• Evaluate methods and techniques, and suggest possible improvements.

Information is accurate as at December 2017
Lesson Delivery and Expectations
The teaching and learning programme in MI aims to improve the scientific literacy of Biology students. The key areas of focus include mastery of content and the language of science, as well as deepening students’ practices of science. Lessons for H2 Biology will usually take the form of tutorials/lectures in a classroom setting. Laboratory experiments, classroom demonstrations, mini projects, class discussions and oral presentations are some regular activities in lessons. Wherever possible, students are required to carry out appropriate practical work to investigate the scientific principles, work collaboratively in teams and engage in higher order thinking. Students are expected to use ICT during lessons. Students also have access to virtual laboratory simulations to deepen their understanding of experimental techniques and scientific research design. Students are expected to read the lecture notes, complete their tutorials and workbook before lessons, and participate actively in all class discussions. Submission of take-home assignments must be punctual, as required by the subject tutor. The quality of the assignments is also considered in Continual Assessment.

Enrichment Opportunities
Pre-University Year 1 - DNA Forensic Analysis Workshop, Biology Olympiad (for selected students), National Science Experiment Big Data Challenge (for selected students), Institute of Bioengineering and Nanotechnology Youth Research Programme (for selected students)
Pre-University Year 2 - Scientific Inquiry Workshop
Pre-University Year 3 - Talks at Science Centre, NUS Lee Kong Chian Natural History Museum

Reference and Learning Materials
• Resource Packages compiled by tutors

Mode of Assessment
Internal assessments include active participation, quizzes, assignments, topical tests, block tests and Promotional/Preliminary Examinations. Students will have to complete Biology projects in their first and second year, which will contribute to the Continual Assessment score for that academic year.

A-Level Examination
H2 Biology students will sit for three written papers and one practical exam.

Paper 1 is of one hour duration and consists of 30 compulsory multiple choice questions. All questions will feature four direct choice options as possible answers.

Paper 2 is of two hour duration and consists of a variable number of structured questions, all of which are compulsory, including data-based or comprehension-type questions. These include questions which require candidates to integrate knowledge and understanding from different areas of the syllabus.
Paper 3 is of two hour duration and consists of a variable number of long structured questions, all of which are compulsory, including data-based or comprehension-type questions and one free-response question. Paper 3 will include items to assess the higher-order skills of analysing, making conclusions and evaluating information. Section A consists of two or more compulsory long structured questions. There will be one or more stimulus material which may be taken or adapted from a source such as a scientific journal or book, and may not relate directly to the content of the syllabus. Section B consists of two free-response questions, of which the student will choose one. A certain percentage of the marks also go towards the quality of scientific argumentation and written communication.

Paper 4 (Practical Paper) will assess different aspects of experimental skills and the ability to carry out investigations, through assessments of the following skills: planning (P), manipulation, measurement and observation (MMO), presentation of data and observations (PDO) and analysis, conclusions and evaluation (ACE).

Subject Coverage

Pre-University Year 1:
- Organelles and Cellular structures
- Biomolecules of Life and Cellular Transport
- Proteins
- Stem Cells
- Structure of Nucleic Acid and Gene Expression
- DNA Mutations
- Organisation of Prokaryotic and Eukaryotic Genome

Pre-University Year 2:
- Cell Cycle
- Genetics of Bacteria
- Genetics of Viruses
- Control of Prokaryotic and Eukaryotic Gene Expression
- Inheritance
- Respiration
- Photosynthesis
- Diversity and Evolution

Pre-University Year 3:
- Cell Signalling
- Principles and Procedures of Molecular Techniques
- Infectious diseases
- Impact of climate change on animals and plants
H1 Chemistry aims to develop scientific literacy in students through the acquisition of core Chemistry knowledge and scientific thinking. It provides students with an experience that develops interest in Chemistry and builds the knowledge, skills and attitudes necessary for them to become scientifically literate citizens who are well-prepared for the challenges of the 21st century. Students will be equipped with the understanding, skills, ethics and attitudes relevant to the Practices of Science, and the appropriate way of thinking to explain phenomena, approach and solve problems. The content in the H1 Chemistry syllabus comprises of three core ideas of Chemistry and one extension topic that is based on application of the core ideas in real-world contexts. The three core ideas are: 1) Matter, 2) Structure and Properties, and 3) Transformation. The extension topic is: Materials. Students are not required to sit for the Practical Exam.

Prerequisite for University Admission
H1 Chemistry is not a mandatory prerequisite subject for any university course.

Course Requirements at MI
Students are expected to have read Pure Chemistry or achieved at least C6 in Combined Science (Physics/Chemistry or Biology/Chemistry) at GCE O-Levels.

Instructional Objectives
On successful completion of this subject, students should be able to:
• Demonstrate knowledge with understanding in relation to:
  • Scientific phenomena, facts, laws, definitions, concepts, theories;
  • Scientific vocabulary, terminology, conventions (including symbols, quantities and units);
  • Scientific instruments and apparatus used, including techniques of operation and aspects of safety;
  • Scientific quantities and their determination; and
  • Scientific and technological applications with their social, economic and environmental implications.

• Use words, symbols, graphical and numerical materials to:
  • Locate, select, organise and present information from a variety of sources;
  • Handle information, distinguishing the relevant from the extraneous;
  • Manipulate numerical and other forms of data and translate them from one form to another;
  • Analyse and evaluate information so as to identify patterns, report trends and conclusions, and draw inferences;
  • Present reasoned explanations for phenomena, patterns and relationships;
  • Apply knowledge, including principles, to novel situations;
  • Bring together knowledge, principles, concepts and skills from different areas of chemistry, and apply them in a particular context;
  • Evaluate information and hypotheses;
  • Construct arguments to support hypotheses or to justify course of action; and
  • Demonstrate an awareness of the limitations of Chemistry theories and models.
Lesson Delivery and Expectations

The key areas of focus of the teaching and learning of H1 Chemistry include content mastery, understanding the nature of Science and the practices of Science. Lessons will usually take the form of tutorials or lectures in a classroom setting. Classroom demonstrations, mini projects, class discussions and oral presentations feature regularly in lessons. Wherever possible, students are required to work collaboratively in teams and engage in higher order thinking. Students will be provided with opportunities to use ICT during lessons. Students will be required to read the necessary notes before lessons, and participate actively in class discussions. Submission of any take-home assignments must be punctual, as required by the subject tutor. The quality of the assignments is also considered as part of Continual Assessment.

Enrichment Opportunities

- In-house enrichment activities such as demonstrations of reactions
- Organic Chemistry Lab

Reference and Learning Materials

- http://www.chemguide.co.uk/
- Cambridge International AS and A Level Chemistry by Peter Cann and Peter Hughes, published by Hodder Education
- Resource Packages compiled by tutors

Mode of Assessment

Internal assessments include active participation, assignments, topical tests, block tests and Promotional/Preliminary Examinations.

A-Level Examination

H1 Chemistry students will sit for two papers, Paper 1 and Paper 2.

Paper 1 is of one hour duration and consists of 30 compulsory multiple choice questions. Five to six items will be of multiple completion type. All questions will include 4 options.

Paper 2 is of two hour duration and comprises of two sections. Section A consists of a variable number of structured questions including data-based questions, all of which are compulsory. The data-based questions test higher order thinking skills such as handling, applying and evaluating information. Section B requires students to answer one out of two questions. The questions will require students to integrate knowledge and understanding from different areas and topics of the Chemistry syllabus.

Subject Coverage

Pre-University Year 1:
- The Mole Concept and Stoichiometry
- Atomic Structure
- Chemical Bonding
- Chemical Energetics: Thermochemistry
- Organic Chemistry
- The Periodic Table

Pre-University Year 2:
- Reaction Kinetics
- Chemical Equilibria
- Theories of Acids and Bases
- Polymers
- Nanomaterials

All students have to undergo a bridging module at the start of the course.
The H2 Chemistry course aims to provide students with an experience that develops interest in Chemistry and builds the knowledge, skills and attitudes necessary for further studies in related fields. It seeks to develop students into scientifically-literate citizens who are well-prepared for the challenges of the 21st century. Students will be equipped with the understanding, skills, ethics and attitudes relevant to the Practices of Science, and the appropriate way of thinking to explain phenomena, approach and solve problems. The content in the H2 Chemistry syllabus is divided into two parts: Core Ideas Syllabus and Extension Topics Syllabus. The Core Ideas Syllabus comprises ten topics on the structure, properties and transformation of matter at the atomic/molecular level. The Extension Topics Syllabus comprises of four topics that apply the concepts in the Core Ideas Syllabus to the study of different chemical systems. Students are also required to sit for the Practical Exam.

**Prerequisite for University Admission**
H2 Chemistry is a mandatory prerequisite for the following university courses in NUS and NTU:

- NUS – Chemical Engineering, Dentistry, Environmental Engineering, Medicine, Pharmacy, Psychology with Life Sciences
- NTU – Bioengineering with a Second Major in Pharmaceutical Engineering, Chemical and Biomolecular Engineering, Chemical and Biomolecular Engineering with a Second Major in Business, Biological Sciences with a Second Major in Food Science and Technology, Biological Sciences with a Second Major in Chemical Biology, Chemistry and Biological Chemistry, Chemistry and Biological Chemistry with a Second Major in Food Science and Technology, Medicine

**Course Requirements at MI**
Students are expected to have achieved at least C6 in Pure Chemistry or B4 in Combined Science (Physics/Chemistry or Biology/Chemistry) at the GCE O-Levels.

**Instructional Objectives**
On successful completion of this subject, students should be able to:

- Demonstrate knowledge with understanding in relation to:
  - Scientific phenomena, facts, laws, definitions, concepts, theories;
  - Scientific vocabulary, terminology, conventions (including symbols, quantities and units);
  - Scientific instruments and apparatus used, including techniques of operation and aspects of safety;
  - Scientific quantities and their determination; and
  - Scientific and technological applications with their social, economic and environmental implications.
- Use words, symbols and numerical materials to:
  - Locate, select, organise and present information from a variety of sources;
• Handle information, distinguishing the relevant from the extraneous;
• Manipulate numerical and other forms of data and translate them from one form to another;
• Analyse and evaluate information so as to identify patterns, report trends and conclusions, and draw inferences;
• Present reasoned explanations for phenomena, patterns and relationships;
• Apply knowledge, including principles, to novel situations;
• Bring together knowledge, principles, concepts and skills from different areas of chemistry, and apply them in a particular context;
• Evaluate information and hypotheses;
• Construct arguments to support hypotheses or justify a course of action; and
• Demonstrate an awareness of the limitation of Chemistry theories and models.
• Demonstrate experimental skills and carry out investigations to:
  • Follow a detailed set or sequence of instructions and use techniques, apparatus and materials safety and effectively;
  • Make, record and present observations and measurements with due regard for precision and accuracy;
  • Interpret and evaluate observations and experimental data;
  • Identify a problem, devise and plan investigations, select techniques, apparatus and materials; and
  • Evaluate methods and techniques, and suggest possible improvements.

Lesson Delivery and Expectations
The key areas of focus of the teaching and learning of H2 Chemistry include content mastery, understanding the nature of Science and the practices of Science. Lessons will usually take the form of tutorials or lectures in a classroom setting. Laboratory experiments, mini project works, class discussions and presentations are some regular activities in lessons. Wherever possible, students are required to carry out appropriate practical work to investigate the scientific principles, work collaboratively in teams and engage in higher order. Students are also expected to use ICT during lessons. Students are required to read the necessary notes before lessons, and participate actively in class discussions. Submission of any take-home assignments must be punctual, as required by the subject tutor. The quality of the assignments is also considered in Continual Assessment.

Enrichment Opportunities
Pre-University Year 1 – Chemical Reactions Demonstration, Chemistry Olympiad (for selected students)
Pre-University Year 2 – Chemistry of Perfume Making, Chemistry Olympiad (for selected students)
Pre-University Year 3 – Chemistry of Coffee at Science Centre

Reference and Learning Materials
• http://www.chemguide.co.uk/
• Cambridge International AS and A Level Chemistry by Peter Cann and Peter Hughes, published by Hodder Education
• A Level Chemistry (4th Edition)by E.N. Ramsden, published by Oxford University Press
• Resource Packages compiled by tutors
**Mode of Assessment**

Internal assessments include active participation, assignments, topical tests, block tests and Promotional/Preliminary examinations. Mini projects can be part of active participation or assignment component.

**A-Level Examination**

H2 Chemistry students will sit for three written papers and one practical exam.

Paper 1 consists of 30 compulsory multiple choice questions. Five to eight items will require completion of sentences. All questions will include four options as answers.

Paper 2 consists of a variable number of structured questions including one or two data-based questions, all of which are compulsory. The data-based questions constitute 20-25 marks and provide a good opportunity to test higher order thinking skills such as handling, applying, and evaluating information. Some questions require students to integrate knowledge and understanding from different areas and topics of the Chemistry syllabus.

Paper 3 consists of two sections. Section A comprises of three to four compulsory free response questions. Each question constitutes 15 to 25 marks. Section B consists of two questions, each worth 20 marks, of which students choose to answer one. These questions require students to integrate knowledge and understanding from different areas and topics of the Chemistry syllabus.

Paper 4 (Practical Paper) is designed to assess students’ competency in practical skills which can be realistically be assessed within the context of a formal practical assessment. Students will be assessed in the following skill areas: planning (P), manipulation, measurement and observation (MMO), presentation of data and observation (PDO) and analysis, conclusions and evaluation (ACE).

**Subject Coverage**

**Pre-University Year 1:**
- The Mole Concept and Stoichiometry/Redox
- Atomic Structure
- Chemical Bonding
- The Gaseous State
- Chemical Energetics:
  - Thermochemistry and Thermodynamics
- Introduction to Organic Chemistry
- Hydrocarbons

**Pre-University Year 2:**
- Reaction Kinetics
- Chemical Equilibria
- Theories of Acids and Bases
- Chemistry of Aqueous Solution
- Halogen Derivatives
- Hydroxyl Compounds
- Carbonyl Compounds
- Carboxylic Acids and Derivatives

**Pre-University Year 3:**
- Nitrogen Compounds
- The Periodic Table
- Electrochemistry
- An Introduction to the
- Chemistry of Transition Elements

All students have to undergo a bridging module at the start of the course.
China Studies in English (CSE) is an inter-disciplinary subject that aims to help students pursue and obtain a holistic awareness and understanding of contemporary China in order to be China-conversant, sensitive to the differences between Singapore and China, and in the future, to be able to potentially contribute in their own capacity to further Singapore-China interactions. The syllabus will focus on key issues related to China’s transformation and its future, the geopolitical, economic and socio-cultural aspects of China’s development since 1978, and will help students to understand both the historical context that brought about these changes as well as the ongoing challenges that these changes have created.

Two key issues provide for a study of China’s contemporary development from an interdisciplinary angle that incorporates perspectives from History, Geography, Economics, Sociology and Political Science. This enables students to examine the state-society relations and international relations in contemporary China.

Prerequisite for University Admission
H1 China Studies in English is not a mandatory prerequisite for any university course.

Course Requirements at MI
There is no prerequisite for this subject.

Instructional Objectives
On successful completion of this subject, students should be able to:
• Examine the key issues of state-society relations and international relations in contemporary China;
• Develop skills in evaluating multiple perspectives to arrive at an informed judgement of issues; and
• Develop an awareness of and interest in developments in China and its interactions with the world.

Lesson Delivery and Expectations
Lessons for H1 China Studies in English will usually take the form of tutorials in a classroom setting. Activities such as debates, classroom discussions, role plays and presentations will be carried out throughout the course of this subject. Students are encouraged to come into class with an open mind to receive and share knowledge concerning China. To facilitate this, students will be expected to keep themselves updated on the current affairs of China and participate actively in all class activities.

Enrichment Opportunities
Learning Journeys to public seminars and inter-college discussions are regularly carried out to enhance students’ appreciation of China’s culture, politics, economy and international relations. Students who perform well will be selected to represent the Institute at the annual Business China Youth Showdown competition either in June or July.

Reference and Learning Materials
Students will be recommended a few books, which are available for loan from the Institute Library. Supplementary readings on current trends in China will also be provided to students during lessons.
Mode of Assessment
Internal assessments include active participation, assignments, tests, block tests and Promotional/Preliminary examinations.

A-Level Examination
H1 CSE students will sit for one 3 hour paper. There will be two sections in the paper. Section A focuses on a case study while Section B focuses on essay questions.

Subject Coverage

Pre-University Year 1:
State-society relations in China (Key Issue 1):
- The key societal changes in China due to its development
- The role of the Chinese state in society
- Social and political challenges created by China’s development
- The effectiveness of the Chinese government in managing a changing society

Pre-University Year 2:
China as a global power (Key Issue 2):
- The factors contributing to China’s foreign policy goals
- China’s evolving role in global affairs
- The challenges and opportunities facing China in its relations with the United States and Japan
- China’s effectiveness in pursuing its foreign policy goals
H2 Chinese Language and Literature (9572)

H2 Chinese Language and Literature aims to develop students with a flair for and interest in the Chinese Language through greater exposure to the language, its literature and its attendant culture. This subject consists of two components: Language and Literature. There is emphasis on the appreciation and understanding of texts and literary works, as well as on developing students' analytical skills in various literary genres, which include the novel, short story, poetry and drama.

Prerequisite for University Admission
A H2 pass in Chinese Language and Literature or at least a C grade in H1 Chinese or at least a B4 for Higher Chinese at GCE O-Levels is a prerequisite for Bachelor of Arts (Chinese Studies / Chinese Language) at NUS. Students who have done well in this subject are eligible for MTL Bonus Points (two points for at least an E grade) if they choose to pursue the following Mother Tongue related subject concentrations in local Universities:

- Chinese Studies
- South Asian Studies
- Communication Studies
- Linguistics and Multilingual Studies
- Arts (Education) with specialisation in Chinese Language and Literature

Course Requirements at MI
Students must have obtained A1 in Chinese Language at GCE O-Level Examination or at least C6 in Higher Chinese at GCE O-Levels. Students who obtained A2 in Chinese Language at GCE O-Level Examination will have to pass a diagnostic test that will be assessed holistically.

Instructional Objectives
On successful completion of this subject, students should be able to:

- Understand linguistic and literary concepts;
- Critically analyse texts using key concepts;
- Present ideas coherently in written form; and
- Understand and appreciate the Chinese culture.

Lesson Delivery and Expectations
Lessons for H2 Chinese Language and Literature will usually take the form of tutorials in a classroom setting. Mini projects, class discussions and oral presentations are some regular activities in lessons to engage students and provide them with an authentic learning experience. Students will be required to participate actively in all class discussions. Submission of take-home assignments must be punctual, as required by the subject tutor.

Enrichment Opportunities
Students will be given a wide range of enrichment opportunities, such as the annual Pre-University Seminar, MTL Fortnight, inter- and intra-school activities and competitions, workshops and Learning Journeys.

Information is accurate as at December 2017
Reference and Learning Materials
Resource Packages will be provided by the respective subject tutors during the course of study.

Mode of Assessment
Written assignments, active participation, tests and mini projects.

A-Level Examination
H2 Chinese Language and Literature consists of three papers:

Paper 1 (Language) comprises two parts. Part 1 assesses Essay Writing, and requires students to write either a narrative or argumentative essay to demonstrate their competency in writing. Students are allowed to use dictionaries approved by the Ministry of Education. Part 2 assesses Comprehension and Language Use in Contemporary Chinese, and tests understanding and application through a comprehension passage and cloze passage. Students are not allowed to use dictionaries for Part 2.

Paper 2 is the e-Examination for Comprehension and Commentary. Students will key in their responses on a laptop. Students are not allowed to use dictionaries for Paper 2.

Paper 3 (Literature) is an open-book examination. This paper requires students to answer four questions based on the four genres that they will be exploring in their course of study: classic texts, short stories, poetry and drama. The duration for Paper 3 is three hours.

Subject Coverage

Pre-University Year 1:
语文:
• 主范畴：青春岁月（成长 / 亲情 / 友情）
现代文教学
中华文化历史概述
阅读理解能力训练
长文缩短技巧训练
写作训练——记叙文、议论文
电脑打字技巧训练
• 专题作业
文学:
• 唐诗《游春》
• 宋词《雨霖铃》、《念奴娇》
• 新诗《心跳》、《错误》
• 小说《药》
• 古文《邹忌讽齐王纳谏》、《六国论》

Pre-University Year 2:
语文:
• 主范畴：
  1. 社区与国家（社区关怀 / 国家认同 / 多元文化）
  2. 环球趋势（文化发展与挑战 / 社会、经济发展与挑战 / 政治发展与挑战）
现代文教学
阅读理解能力训练
长文缩短技巧训练
写作训练——记叙文、抒情文、议论文、说明文
文学:
• 唐诗《燕歌行》、《旅夜书怀》
• 宋词《声声慢》
• 新诗《惠安女子》《来生你若再为芙蕖》
• 小说《一把青》
• 戏剧《啼笑因缘》、《傻姑娘与怪老树》
• 古文《前出师表》、《柳敬亭说书》、《岳飞》、《岳阳楼记》

Pre-University Year 3:
语文：复习
文学：武侠小说《天龙八部》节选（第41回至第43回）
Economics is a social science that studies how economic agents – consumers, producers and governments – allocate limited resources in order to satisfy unlimited wants. It provides students with a specific Economics lens to examine economic and socio-economic issues.

The H1 Economics syllabus provides the basis for a broad understanding of basic economic concepts and tools of analysis so that students are able to appreciate economics from the perspectives of different economic agents. The syllabus is organised around three major themes. Students will examine economic phenomena, beginning with the individual and societal levels (microeconomic analysis), followed by the national level (macroeconomic analysis). The three themes examined are (i) The Central Economic Problem, (ii) Markets, and (iii) The National Economy. All three themes have a focus on the Singapore economy.

Prerequisite for University Admission
H1 Economics is not a mandatory prerequisite subject for any university course.

Course Requirements at MI
There is no prerequisite for this subject.

Instructional Objectives
On successful completion of this subject, students should be able to:
• Demonstrate knowledge and understanding of economic concepts, theories and principles;
• Interpret economic information presented in textual, numerical or graphical form;
• Make valid inferences from information presented and evaluate the reliability of information given;
• Apply relevant economic concepts, theories and principles to analyse contemporary issues, perspectives and policy choices;
• Construct coherent economic arguments;
• Evaluate critically contemporary issues, perspectives and policy choices;
• Recognise unstated assumptions and evaluate their relevance; and
• Synthesise economic arguments to arrive at well-reasoned judgements and decisions.

Lesson Delivery and Expectations
Lessons for H1 Economics will usually take the form of seminar-style lectures and tutorials in a classroom setting. Class discussions are regular activities in lessons. Students will be required to read the necessary class notes before lessons, and participate actively in all class discussions. Submission of take-home assignments must be punctual, as required by the subject tutors.

Enrichment Opportunities
• Economics seminars such as the NTU-MOE Seminar on Economics and Public Policy and the Economic Society of Singapore Annual Economics Seminar
• Inter-school competitions such as the Budget Quiz/Challenge and the Economic Development Board National Economics Short Film Competition

Reference and Learning Materials
• Lecture notes and tutorials on a topical basis
• Sloman, John (2009). Economics (7th ed.). Pearson Education
Mode of Assessment
Internal assessments include active participation in class discussions (that may include presentations), tutorial preparation, topical tests, block tests and the Promotional / Preliminary Examinations. Active class participation includes quality of preparation of tutorials, engagement (attentiveness and frequency of contributions) and punctuality.

A-Level Examination
Students offering the subject will sit for one three hour paper. The paper will include two case studies. Each of these will consist of two to three pages of data presented in textual, numerical or graphical form. Each will present contemporary multi-faceted economic issues or policies which may be from one or more themes in the syllabus.

The data for each case study will be followed by six to eight part-questions, including sub-parts. These questions will require students to apply relevant economic concepts, theories and principles in analysing, synthesising and evaluating economic issues, perspectives or policies, with reference to the data provided. Each case study carries 45 marks and constitutes 50% of the total marks. About 18 marks of each set of case study questions will be for data response questions, and about 27 marks will be for higher-order questions.

Subject Coverage

Pre-University Year 1:
• Scarcity as the Central Economic Problem
• Price Mechanism and its Applications
• Market Failure

Pre-University Year 2:
• Introduction to Macroeconomic Analysis
• Standard of Living
Economics is a social science that studies how economic agents – consumers, producers and governments – allocate limited resources in order to satisfy unlimited wants. It provides students with a specific Economics lens to examine economic and socio-economic issues.

The H2 Economics syllabus provides the basis for a broad understanding of basic economic concepts and tools of analysis so that students are able to appreciate economics from the perspectives of different economic agents. The syllabus is organised around three major themes. Students will examine economic phenomena, beginning with the individual and societal levels (microeconomic analysis), followed by the national and global levels (macroeconomic analysis). The three themes examined are (i) Scarcity as the Central Economic Problem, (ii) Markets, and (iii) The National and International Economy.

Prerequisite for University Admission
It is not a mandatory prerequisite subject for any university course.

Course Requirements at MI
There is no prerequisite for this subject.

Instructional Objectives
On successful completion of this subject, students should be able to:
• Demonstrate knowledge and understanding of economic concepts, theories and principles;
• Interpret economic information presented in textual, numerical or graphical form;
• Make valid inferences from information presented and evaluate the reliability of information given;
• Apply relevant economic concepts, theories and principles to analyse contemporary issues, perspectives and policy choices;
• Construct coherent economic arguments;
• Evaluate critically alternative theoretical explanations, contemporary issues, perspectives and policy choices;
• Recognise unstated assumptions and evaluate their relevance; and
• Synthesise economic arguments to arrive at well-reasoned judgements and decisions.

Lesson Delivery and Expectations
Lessons for H2 Economics will usually take the form of seminar-style lectures and tutorials in a classroom setting. Class discussions are regular activities in lessons. Students will be required to read the necessary notes before lessons, and participate actively in all class discussions. Submission of take-home assignments must be punctual, as required by the subject tutors.

Enrichment Opportunities
• Learning Journeys
• Economics seminars such as the NTU-MOE Seminar on Economics and Public Policy and the Economic Society of Singapore Annual Economics Seminar
• Inter-school competitions such as the Budget Quiz/Challenge and the Economics Development Board National Economics Short Film Competition

Reference and Learning Materials
• Lecture notes and tutorials on a topical basis
• Sloman, John et al. (2012). Economics (8th ed.). Prentice Hall
Mode of Assessment
Internal assessments include active participation in class discussions that may include presentations, tutorial preparation, topical tests, block tests and Promotional/Preliminary Examinations. Active class participation includes: quality of preparation of tutorials, engagement (attentiveness and frequency of contributions) and punctuality.

A-Level Examination
Students offering the subject will sit for two papers, each of two hours and 15 minutes’ duration.

Paper 1 has a weighting of 40% of the total marks and comprises two compulsory case studies. Students are required to answer all questions for each case study. Each of these will consist of two to three pages of data presented in textual, numerical or graphical form. Each will concern contemporary multifaceted economic issues or policies, which may be from one or more themes in the syllabus. The data for each case study will be followed by six or seven part-questions. These questions will require students to apply relevant economic concepts, theories and principles in analysing, synthesising and evaluating economic issues, perspectives or policies, with reference to the data provided. Each case study carries 30 marks.

Paper 2 has a weighting of 60% and comprises six essay questions. Students are required to answer a total of three essay questions, of which one must be from Section A, one from Section B and one from either Section A or B. Questions in Section A will focus mainly on microeconomics and questions in Section B will focus mainly on macroeconomics. Each essay question may or may not be divided into part (a) and part (b). Questions may be put in real-world contexts. Students are expected to apply relevant economic concepts, theories and principles to analyse issues and to evaluate perspectives or policies. They should synthesise and construct coherent arguments to arrive at well-reasoned judgements and decisions. Each essay question carries 25 marks.

Subject Coverage
Pre-University Year 1:
- Scarcity as the Central Economic Problem
- Price Mechanism and its Applications
- Market Failure

Pre-University Year 2:
- Introduction to Macroeconomics
- Macroeconomic Aims and Policies
- Globalisation and the International Economy

Pre-University Year 3:
- Firms and Decisions
General Paper aims to develop in students the ability to think critically, construct cogent arguments and communicate their ideas using clear and accurate language. It encourages students to explore issues of global and local significance, and provides them with a good set of knowledge to help them do well in a fast-changing world.

Prerequisite for University Admission

- At least a B grade to be considered for NUS Law, NTU Communications, SMU Law.
- A good pass for NTU Sociology.
- A pass for NIE Arts (Education) and Science (Education).
- NUS students without a C grade or better will need to sit for a Qualifying English Test.

Course Requirements at MI
There is no prerequisite for this subject.

Instructional Objectives
On successful completion of this subject, students should be able to:

- Demonstrate a broad and mature understanding of a range of issues and current affairs;
- Analyse and evaluate issues across disciplines, showing awareness of their significance and implications;
- Present informed personal responses in a cogent manner

They should be able to comprehend texts in detail and as a whole, demonstrating the ability to:

- Identify claims;
- Infer relevant meaning;
- Summarise information;
- Evaluate viewpoints; and
- Respond critically to a text.

Lesson Delivery and Expectations
Lessons for H1 General Paper take the form of lectures and tutorials in a classroom setting. Skills are taught using materials from a variety of sources, such as newspapers, online articles and videos. Process writing, group discussions, student presentations and peer assessment are part and parcel of a General Paper lesson. Students will be expected to participate actively in all discussions and activities.

Information is accurate as at December 2017
**Enrichment Opportunities**
- Pre-University Seminar
- Talks and seminars led by specialists and researchers
- Writing competitions

**Reference and Learning Materials**
- Paper 1 and Paper 2 Skills Package
- Content Package
- Compilation of A-Level and other Junior Colleges’ Papers

**Subject Coverage**

**Pre-University Year 1:**

<table>
<thead>
<tr>
<th>Topics</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Gender, Family and Marriage</td>
<td>Paper 1 - Evaluative and Organisational Skills for essay writing</td>
</tr>
<tr>
<td>• Prejudice and Discrimination</td>
<td>Paper 2 - Summary, Paraphrasing and Post-reading skills</td>
</tr>
<tr>
<td>• Education</td>
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<tr>
<td>• Globalisation</td>
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<tr>
<td>• Youth and the Elderly</td>
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<td>• Sports and Leisure</td>
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</table>

**Pre-University Year 2:**

<table>
<thead>
<tr>
<th>Topics</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Language and the Arts</td>
<td>Paper 1 - Use of Rhetoric and Argumentation Skills for Essay Writing</td>
</tr>
<tr>
<td>• Science and Technology</td>
<td>Paper 2 - Inference and Comparison Skills</td>
</tr>
<tr>
<td>• Environment and Heritage Conservation</td>
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<tr>
<td>• Crime and Punishment</td>
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<tr>
<td>• Government, Society and the Individual</td>
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</tbody>
</table>

**Pre-University Year 3:**

<table>
<thead>
<tr>
<th>Topics</th>
<th>Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Singapore Issues</td>
<td>Skills Revision for Paper 1 and 2</td>
</tr>
<tr>
<td>• Government and Politics</td>
<td></td>
</tr>
<tr>
<td>• International Cooperation and Competition</td>
<td></td>
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<tr>
<td>• Global Threats and Security</td>
<td></td>
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<tr>
<td>• Content Revision</td>
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</tr>
</tbody>
</table>

**Mode of Assessment**

Students will be assessed on class participation, timed and take-home assignments, and a research project in Pre-University Years 1 and 2.

**A-Level Examination**

Students will sit for two written papers (Paper 1 and Paper 2) of one hour and 30 minutes each. They are required to answer one essay question in Paper 1. For Paper 2, they are required to answer questions based on one or two passages.
H1 General Studies in Chinese (8642) is structured to engage students of higher Chinese ability in the critical analysis of current affairs in Singapore, Asian and international contexts. It enables students to identify patterns and links, recognise changes and continuity, and understand the interplay of forces that have shaped local as well as world events and developments.

Prerequisite for University Admission
One bonus point is awarded to applicants who attained at least a B grade in H1 General Studies in Chinese if they choose to pursue Mother Tongue related subject concentrations in local Universities:
- Chinese Studies
- South Asian Studies
- Communication Studies
- Linguistics and Multilingual Studies
- Arts (Education) with specialisation in Chinese Language and Literature

Course Requirements at MI
Students must have attained
- At least C6 in Higher Chinese at GCE O-Levels or
- A1 for GCE O-Level Chinese Language* and must obtain at least an E grade or better for H1 Chinese Language at the GCE A-Level examination in PU1

*Students who obtained A2 in Chinese Language at GCE O-Level Examination will have to take a diagnostic test and be assessed accordingly.

Foreign students who did not take the GCE O-Level examination will have to pass a placement test/diagnostic test that will be assessed holistically. They must also obtain at least an E grade or better for H1 Chinese Language at the GCE A-Level examination in PU1.

Instructional Objectives
On successful completion of this subject, a student should be able to:
- Keep track of current affairs closely;
- Learn to analyse and evaluate government policy;
- Do cross-discipline studies;
- Broaden his/her scope of perspective; and
- Use various thinking tools and approaches such as mind-mapping, PEEL etc to organise and communicate their thoughts in a coherent and concise manner.

Lesson Delivery and Expectations
Lessons for H1 General Studies in Chinese take the form of tutorials in a classroom setting. Introduction of the Singapore background will be carried out at the beginning of PU1. This is to lay the foundation for international students and enhance the understanding in the local students. Mini projects, class discussions and presentations are regular activities in lessons.

Students will be required to read the necessary notes before lessons, and participate actively in all class discussions. Submission of any take-home assignments must be punctual, as required by the subject tutor.

Enrichment Opportunities
Students are given a wide range of enrichment opportunities including the annual GSC Seminar, MTL Fortnight and Learning Journeys.

Reference and Learning Materials:
- Forum section of Zaobao and Straits Times, NewsLink etc
- Resource Packages will be provided by the subject tutors during the course of study.

Information is accurate as at December 2017
H1 GENERAL STUDIES IN CHINESE (8642)

Mode of Assessment

For Internal assessment, PU1 will be assessed through Participation, topical tests, classroom-based assignments and examinations while PU2 will be assessed through topical tests and examinations.

A-Level Examination

There are 2 parts to the paper. Part A is Essay Writing which requires students to write an argumentative essay based on the current affairs in Singapore, Asian and International contexts that they will be exploring in their course of study. Part B is Comprehension that assesses understanding and application on comprehension, vocabulary and summary. The duration for this paper is 2 hours 40 mins (Part A is 1 1/2 hour and Part B is 1 hour 10 mins).

Subject Coverage

Pre-University Year 1:
甲、本地时事与重要课题
(a) 政治:
• 多元种族社会的政治现实
• 国家所面对的问题和挑战
• 国民的爱国意识
• 国防与全民防卫
(b) 经济:
• 自由贸易与保护主义
• 公积金制度与新加坡社会的发展
• 向海外发展
• 经济前景
• 新加坡文化的特色
• 文化大熔炉
• 各民族的文化传统
• 优雅社会
• 电影/电视节目的检查尺度
• 文化活动与文娱表演

Pre-University Year 2:
甲、本地时事与重要课题
(d) 社会:
• 各种社会运动（如：礼貌运动、讲华语运动、环保运动等）
• 各种社会问题（如：单身、未婚、抽烟、福利等）
• 宗乡会馆
(e) 教育:
• 双语教育制度
• 精英教育
• 各类型学校（如：自主学校、特选学校、自治学校等）
• 灵活学习与创造力

乙、中华文化与价值观:
* 中华文化的特色 * 语言与文字
* 中华文学的特色 * 节日与礼俗
* 中华艺术（如：书法、篆刻、剪纸、传统戏曲等）

丙、国际时事与重要课题
* 亚洲四小龙的经济成长 * 亚细安国家的相互关系
* 国际间的经济合作 * 新加坡与外国的关系
* 环保运动
H1 GEOGRAPHY (8813)

Geography at the H1 level comprises learning about climate change and flooding, urban change, and geographical inquiry and investigation. Students reading this subject will understand the workings of atmospheric and hydrologic processes in the tropics through a systems approach that examines the environmental impact of cities and the unevenness of socio-economic development, and have a range of opportunities to carry out fieldwork in order to deepen their understanding of what they have learned.

Prerequisite for University Admission
H1 Geography is not a mandatory prerequisite subject for any university course.

Course Requirements at MI
There is no prerequisite for this subject.

Instructional Objectives
On successful completion of this subject, students should be able to:
• Use feedback loops to analyse the effect of human activities on the natural environment and how humans are in turn affected by environmental hazards related to climate change such as floods;
• Deliberate on the contradictions between achieving intergenerational equity and building liveable urban environments to meet present needs; and
• Craft research questions, plan investigations, collect, present and analyse data, evaluate and communicate their findings to different audiences.

Lesson Delivery and Expectations
Lessons usually take the form of interactive seminars in a classroom setting. Experiential learning activities and small group discussions allow students to engage in deliberate practice at ‘thinking geographically’ in the form of making and testing arguments and hypotheses about specific topics, solving problems and critiquing their own reasoning and that of others. Students are required to read and source for relevant examples and case studies from both print and non-print resources such as newspapers, news magazines, online journals and websites. Submission of take-home assignments must be punctual, as required by the subject tutor.

Enrichment Opportunities
Geography students have opportunities to participate in different enrichment programmes and activities such as fieldwork and mini projects. Learning Journeys to relevant organisations may be carried out to enhance the learning experience of Geography students. Students who perform well can be identified by tutors to participate in various geography-centred competitions such as the Singapore Land Authority Spatial Challenge aimed at encouraging the use of Geographic Information Systems (GIS) to investigate and solve constraints and challenges resulting from physical-human interactions.
Reference and Learning Materials
While the Geography unit does not prescribe any
textbook, recommended reference materials are
indicated in the resource package and are available
for loan from the Institute Library.

Potential Geography students may refer to the
suggested booklist contained in the syllabus
document, available on the SEAB website.

A-Level Examination
A-Level Examination for H1 Geography is a 3 hour paper consisting of Sections A, B and C.
Allocation of marks, question type and format is as presented in the table below.

<table>
<thead>
<tr>
<th>Section A</th>
<th>Section B</th>
<th>Section C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marks</td>
<td>25 marks</td>
<td>25 marks</td>
</tr>
<tr>
<td>Question Type</td>
<td>Data Response Question</td>
<td>Data Response Question</td>
</tr>
<tr>
<td>Format</td>
<td>Students answer one question based on Theme 3</td>
<td>Students answer one question based on Theme 1 or Theme 2</td>
</tr>
<tr>
<td>Additional notes:</td>
<td>The question will carry 25 marks and consist of no more than five parts.</td>
<td>Additional notes: The question will carry 25 marks and consist of no more than five parts</td>
</tr>
</tbody>
</table>

Source: Geography Teaching and Learning Syllabus for Syllabus 8813, 2015

Subject Coverage

Pre-University Year 1:
Core Topic 1: Climate Change and Flooding
• Tropical Climates and Atmospheric Processes
• Effects of Climate Change
• Catchment Hydrology
• Flooding in the Tropics

Core Topic 2: Urban Change
• Sustainable Development and its issues
• Urbanisation and Liveability
• Improving Liveability in Cities

Pre-University Year 2:
Core Topic 3: Geographical Investigation for
• Factors influencing flood risk and ways to mitigate it
• Influence of land use on infiltration rates
• Liveability of urban neighbourhoods
• Needs analysis of the elderly living in an urban neighbourhood.
H2 GEOGRAPHY (9751)

Geography at H2 level comprises of learning about tropical environments, development, economy and the environment, sustainable development and the use of geographical investigation to inquire into various important geographical topics and concepts. Students reading this subject will be able to understand the world using various geographical concepts, such as system, space and time, place and scale.

Prerequisite for University Admission
H2 Geography is not a mandatory prerequisite subject for any university course.

Course Requirements at MI
There is no prerequisite for this subject.

Instructional Objectives
On successful completion of this subject, students should be able to develop an understanding of:

• The uniqueness of different types of natural environments and places;
• The interactions and interdependence between natural environments, societies and cultures at various scales;
• The evolution of landscapes and development of issues over time;
• The processes that shape natural environments, societies and cultures at various scales;
• The connections, trends and patterns in different parts of Asia and the rest of the world;
• A range of contemporary issues in different parts of Asia and the rest of the world through geographical perspectives;
• Different approaches to solve real-world problems and achieve sustainable development; and
• The connections between different sub-fields of Geography.

Lesson Delivery and Expectations
Lessons usually take the form of interactive seminars in a classroom setting. Experiential learning activities and small group discussions allow students to engage in deliberate practice at ‘thinking geographically’ in the form of making and testing arguments and hypotheses about specific topics, solving problems and critiquing their own reasons and that of others.

Students are required to read and source for relevant examples and case studies from both printed and non-print resources such as newspapers, news magazines, online journals and websites. Submission of take-home assignments must be punctual, as required by the subject tutor.

Enrichment Opportunities
Geography students have opportunities to participate in different enrichment programmes and activities such as fieldwork and mini projects. Learning Journeys to relevant organisations may be carried out to enhance the learning experience of Geography students. Students who perform well can be identified by tutors to participate in various Geography-centred competitions such as the URA CUBE Challenge, Young Mayors’ Competition and the Singapore Land Authority Spatial Challenge aimed at encouraging the use of Geographic Information Systems (GIS) to investigate and solve constraints and challenges resulting from physical-human interactions.
Reference and Learning Materials
While the Geography unit does not prescribe any textbook, recommended reference materials are indicated in the resource package and are available for loan from the Institute Library. Potential Geography students may refer to the suggested booklist contained in the syllabus document, available from the SEAB website.

Mode of Assessment
Continual Assessment is graded based on class participation, topical tests and assignments (tutorials, timed assignments, and case study evaluations).

A-Level Examination
The H2 national examination consists of two papers taken in two separate sittings. Students are given three hours to complete each paper.

Paper 1 will feature six structured essay questions (SEQs) that assess students’ mastery of subject knowledge and skills featured in Themes 1, 2 and 3 in the syllabus. Students are required to answer three SEQs in total, one from each theme. Each SEQ will carry two subparts worth 12 and 20 marks respectively.

Paper 2 will feature four data-response questions (DRQs) that assess students’ mastery of subject knowledge and skills featured in Themes 1, 2, 3 and 4 in the syllabus. Students are required to answer all four DRQs. Each DRQ will carry no more than five sub-parts. Two nine-mark open-ended sub-parts will be set in this paper.

Subject Coverage
Pre-University Year 1:
Theme 1: Tropical Environment
• Landscapes and Issues in the Tropics: Flooding and Deforestation.

Theme 4: Geographical Investigation: Living with Rivers

Pre-University Year 2:
Theme 2A: Development, Economy and Environment (Part 1)

Theme 4: Geographical Investigation: People and the Economy

Theme 2B: Development, Economy and Environment (Part 2)

Pre-University Year 3:
Theme 3A: Sustainable Development (Part 1)
• Climate Change and Energy: Sustainable development as our common future, Climate Change and Sustainable Development, The Use of Alternative Energy Sources to Mitigate Climate Change

Theme 3B: Sustainable Development (Part 2)

Theme 4: Geographical Investigation: Urban Living Today
H1 History is a contemporary study of international and regional developments in the 20th century. The study of H1 History enables students to cultivate an awareness of Historical Understanding while exposing them to critical global and regional developments. Through this study, students will acquire an understanding of the impact of the Cold War across different contexts and time periods.

**Prerequisite for University Admission**
H1 History is not a mandatory prerequisite subject for any university course.

**Course Requirements at MI**
While there are no subject requirements, students planning to take H1 History need to have a reasonable command of the English Language, because extensive academic reading and writing are required. Unlike the short structured essays for O-Level Combined Humanities, A-Level History students are expected to write a minimum of three pages for each essay question.

**Instructional Objectives**
On successful completion of this subject, a student should be able to:
- Develop and interest and curiosity about the past
- Deepen Historical Understanding through
  - Acquiring a sound knowledge of selected periods and issues
  - Examining historical issues and events through exploring a variety of historical sources
  - applying Historical Concepts of Cause & Effect and Change & Continuity
  - using historical methods and processes
- Think independently and make informed judgments about historical issues and events
- Communicate substantiated arguments on historical issues and events in a clear and well-structure manner
- Develop empathy with people living in diverse places and at different times
- Enhance their sense identity

**Lesson Delivery and Expectations**
H1 History involves studying the Cold War and its impact on international, regional and local forces. Hence, students will not just learn about the Cold War in Europe, but also in Asia and in the context of ASEAN’s development. The United Nations will also be studied in this course.

Students are expected to engage actively in learning through participation in class discussions and by raising pertinent questions. Students are also expected to be independent learners by conducting additional academic research, setting their own learning goals and designing their own learning plan to achieve their goals. Active listening and effective note-taking are also required, especially during lessons. Students are expected to take responsibility for their own learning by observing punctuality in the submission of assignments and in attending lessons.

The history curriculum focuses on developing students’ curiosity of the past and their critical thinking skills. Apart from classroom assessment, students are expected to engage in the craft of the historian by ‘doing’ History through the process of curating historical sources and to demonstrate their ability to transfer their learning through an authentic assessment task.

**Enrichment Opportunities**
To support authentic learning, Pre-University Year
1 and Pre-University Year 2 H1 History students can look forward to the opportunities to attend external academic lectures, Singapore Parliament Sittings and external Model United Nations conferences.

Reference and Learning Materials:
There are no prescribed textbooks for H1 History, but students can use the following books as references:

Mode of Assessment
Internal assessments include active participation, assignments, tests, block tests and the Promotional/Preliminary examinations. Students' participation will be assessed on their level of preparedness for class, engagement with learning, ability to apply knowledge learnt and the quality of discussion.

A-Level Examination
H1 History students will sit for one written paper, with a duration of three hours. The paper is divided into two sections, in which students are required to answer the compulsory source-based study in Section A (40 marks) and two essay questions in Section B (60 marks).

Subject Coverage
Pre-University Year 1:
- Understanding the Cold War
- The Cold War and Asia

Pre-University Year 2:
- Understanding the Cold War
- The Cold War and the United Nations

<table>
<thead>
<tr>
<th>Section A</th>
<th>Section B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marks</td>
<td>40 marks</td>
</tr>
<tr>
<td>Question Type</td>
<td>Source Based Case Study</td>
</tr>
<tr>
<td>Format</td>
<td>Students will answer the compulsory source-based case study set comprising two sub-questions. a) Compare 2 sources (10 marks) b) Test assertion using all sources (30 marks) The Source-Based Study will be based on Theme 1: Understanding the Cold War</td>
</tr>
</tbody>
</table>
H2 History is a contemporary study of regional and international developments in the 20th century. The study of H2 History enables students to cultivate an awareness of Historical Understanding while exposing them to critical global and regional developments. Students will examine key developments in the Cold War, the Global Economy and the United Nations for Paper 1, as well as the political, economic and social developments of Southeast Asia for Paper 2.

Prerequisite for University Admission
H2 History is not a mandatory prerequisite subject for any university course.

Course Requirements at MI
While there are no subject requirements, students planning to take H2 History need to have a reasonable command of the English Language, because extensive academic reading and writing are required. Unlike the short structured essays for Combined Humanities, A-Level History students are expected to write a minimum of three pages for each essay question.

Instructional Objectives
On successful completion of this subject, a student should be able to:

• Develop and interest and curiosity about the past
• Deepen Historical Understanding through
  • Acquiring a sound knowledge of selected periods and issues
  • Examining the diverse approaches to and interpretations of historical issues and events
  • Strengthening Knowledge and Application of historical concepts
  • using historical methods and processes
  • Appreciating the nature and variety of historical sources
• Think independently and make informed judgments about historical issues and events
• Communicate substantiated arguments on historical issues and events in a clear and well-structure manner
• Develop empathy with people living in diverse places and at different times
• Enhance their sense identity

Lesson Delivery and Expectations
H2 History consists of two components: Shaping the International Order, 1945 to 2000 (Paper 1) and The Making of Independent Southeast Asia, Independence to 2000 (Paper 2).

Students are expected to engage actively in learning, through participation in class discussions and by raising pertinent questions. Students are also expected to be independent learners, by conducting additional academic research, setting their own learning goals and designing their own learning plan to achieve their goals. Active listening and effective note-taking are also required, especially during lessons. Students are expected to take responsibility for their own learning by observing punctuality in the submission of assignments and in attending lessons.

The history curriculum focuses on developing students’ critical thinking skills through the process of historical inquiry. Apart from classroom assessment, students are expected to engage in the craft of the historian by ‘doing’ History through the process of curating historical sources and to demonstrate their ability to transfer their learning through an authentic assessment task.
Enrichment Opportunities
To support authentic learning, Pre-University Year 1 and Pre-University Year 2 H1 History students can look forward to opportunities to attend external academic lectures, Singapore Parliament Sittings and external Model United Nations conferences.

Reference and Learning Materials:
There are no prescribed textbooks for H1 History, but students can use the following books as references:

Mode of Assessment
Internal assessments include active participation, assignments, tests, block tests and the Promotional/ Preliminary examinations. Students’ participation will be assessed on their level of preparedness for class, engagement with learning, ability to apply knowledge learnt and the quality of discussion.

A-Level Examination
H1 History students will sit for one written paper, with a duration of three hours. The paper is divided into two sections, in which students are required to answer the compulsory source-based study in Section A (40 marks) and two essay questions in Section B (60 marks).

Subject Coverage
Pre-University Year 1:
• Paper 1: Understanding the Cold War
• Paper 1: Safeguarding International Peace and Security (United Nations)
• Paper 2: Search for Political Stability
• Paper 2: Regional Conflicts and Cooperation

Pre-University Year 2:
• Paper 1: Understanding the Cold War
• Paper 1: Safeguarding International Peace and Security (United Nations)
• Paper 2: Economic Development after Independence
• Paper 2: Regional Conflicts and Cooperation

Pre-University Year 3:
• Paper 1: Understanding the Global Economy
• Paper 2: Regional Conflicts and Cooperation

<table>
<thead>
<tr>
<th>Section A</th>
<th>Section B</th>
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<tbody>
<tr>
<td>Marks</td>
<td>40 marks</td>
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<tr>
<td>Marks</td>
<td>60 marks</td>
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<tr>
<td>Question Type</td>
<td>Source Based Case Study</td>
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<tr>
<td>Question Type</td>
<td>Essays</td>
</tr>
<tr>
<td>Format</td>
<td>Students will answer the compulsory source-based case study set comprising two sub-questions. a) Compare 2 sources (10 marks) b) Test assertion using all sources (30 marks) The Source-Based Study will be based on Theme 1: Understanding the Cold War</td>
</tr>
<tr>
<td>Format</td>
<td>Students will answer: - 1 out of 2 essay questions set on Theme 2 (30 marks) - 1 out of 2 essay questions set on Theme 3 (30 marks)</td>
</tr>
</tbody>
</table>
The study of Literature in English at the H1 level should be seen as a process of critically examining texts. In addition to the study of stylistic features, students will also examine the contexts that led to the production of these texts, as well as how these texts are relevant to their own experiences. Students will engage with texts at various cognitive and affective levels, and explore their connections with different social issues. Students will be encouraged to read, reflect, discuss and respond to texts using appropriate tools for literary analysis, as well as present their thoughts in coherent writing. Students offering H1 Literature in English will read only Paper 1.

Prerequisite for University Admission
H1 Literature in English is not a mandatory prerequisite subject for any university course.

Course Requirements at MI
Have read Literature at the GCE O-Level, or achieved at least C5 in Combined Humanities or C5 in English Language.

Instructional Objectives
On successful completion of this subject, a student should have:
• An appreciation of, and an informed personal response to, Literature in English;
• A love for reading through exposure to a wide range of texts;
• The ability to read texts independently;
• An understanding of the historical and cultural contexts for literary production;
• An understanding of the nature and methods of literary study;
• The skills of critical literary analysis; and
• The ability to communicate ideas effectively and persuasively.

Lesson Delivery and Expectations
Lessons for H1 Literature in English will primarily be carried out in a tutorial setting. The tutor will focus on the analysis of poetry as well as the two texts required of the paper. Lectures, group discussions and class presentations are part and parcel of a Literature lesson.

Enrichment Opportunities
• Drama performances

Reference and Learning Materials
• Skills Package for Paper 1
• Frankenstein by Mary Shelley
• Playing for Time by Arthur Miller

Information is accurate as at December 2017
Mode of Assessment
Students will be assessed on class participation, timed assignments and a research project (Pre-University Year 1).

A-Level Examination
Students will complete a three-hour paper comprising three sections: Section A, Section B and Section C. Section A requires the analysis of unseen poetry, Section B the analysis of a set text (prose) and Section C the analysis of a set text (drama).

Subject Coverage

Pre-University Year 1:
• Analysis of poetry
• Text 1 - *Frankenstein* by Mary Shelley

Pre-University Year 2:
• Analysis of poetry
• Text 2 - *Playing for Time* by Arthur Miller
The study of Literature in English at the H2 level should be seen as a process of critically examining texts. In addition to the study of stylistic features, students will also examine the contexts that led to the production of these texts, as well as how these texts are relevant to their own experiences. Students will engage with texts at various cognitive and affective levels, and explore their connections with different social issues. Students will be encouraged to read, reflect, discuss and respond to texts using appropriate tools for literary analysis, as well as present their thoughts in coherent writing. At the H2 level, students will also be encouraged to understand the concept of the “literary” and what it constitutes. The course will seek to develop a critical and analytical bent, as well as maturity of thought in students. For H2 Literature in English, students will offer both Paper 1 and Paper 3.

Prerequisite for University Admission
H2 Literature in English is not a mandatory prerequisite subject for any university course.

Course Requirements at MI
Have read pure Literature at the GCE O-Level, or achieved at least B3 in Combined Humanities or B4 in English Language.

Instructional Objectives
On successful completion of this subject, a student should have:
• An appreciation of, and informed personal response to, Literature in English;
• A love for reading through exposure to a wide range of texts;
• The ability to read texts independently;
• An understanding of the historical and cultural contexts for literary production;
• An understanding of the nature and methods of literary study;
• The skills of critical literary analysis; and
• The ability to communicate ideas effectively and persuasively.

Lesson Delivery and Expectations
Lessons for H2 Literature in English will primarily be carried out in a tutorial setting. The subject tutor will focus on the analysis of poetry, prose and drama as well as the five texts required of the subject. Lectures, group discussions and presentations are part and parcel of a Literature lesson.

Students will be required to read the texts as well as the assigned notes before lessons and participate actively in all class discussions and activities.

Enrichment Opportunities
• Drama performances

Information is accurate as at December 2017
Reference and Learning Materials

- Skills Packages for Paper 1 and Paper 3
- Paper 1 Reading Literature texts:
  - *Frankenstein* by Mary Shelley
  - *Playing for Time* by Arthur Miller
- Paper 3 The Mind and Self in Literature texts:
  - *Regeneration* by Pat Barker
  - *Hamlet* by William Shakespeare
  - *Who’s Afraid of Virginia Woolf?* by Edward Albee

Subject Coverage

Pre-University Year 1:
- Paper 1
  - Analysis and comparison of poetry
  - Text 1 – *Frankenstein* by Mary Shelley
- Paper 3
  - Analysis of prose (Term 1 and Term 2) and poetry (Term 3 and Term 4)
  - Text 1 – *Regeneration* by Pat Barker

Pre-University Year 2:
- Paper 1
  - Analysis and comparison of poetry
  - Text 2 – *Playing for Time* by Arthur Miller
- Paper 3
  - Analysis of drama
  - Text 2 – *Hamlet* by William Shakespeare
  - Comparison of texts

Pre-University Year 3:
- Paper 1
  - Revision
- Paper 3
  - Text 3 – *Who’s Afraid of Virginia Woolf?* by Edward Albee (Semester 1)
  - Comparison of texts (Semester 1)
  - Revision (Semester 2)

Mode of Assessment

Students will be assessed on class participation, timed assignments and a research project (Pre-University Year 1).

A-Level Examination

Students will take two three-hour papers (Paper 1 and Paper 3). Each paper comprises three sections, Section A, Section B and Section C. Paper 1 consists of a comparison of poems, one set text (prose) and one set text (drama). Paper 3 consists of an unseen section (poetry, prose or drama), a comparison of texts and a section focusing on the analysis of a single text.
H2 Malay Language and Literature (9573) aims to develop students with a flair and interest in the Malay Language through greater exposure to the language, literature and culture. This subject consists of two components: language and literature. An emphasis is placed on the appreciation and understanding of texts and literary works through developing students’ analytical skills of various literary genres including the novel, short stories, poetry and drama.

Prerequisite for University Admission
A pass in H2 Malay Language and Literature is a prerequisite for Bachelor of Arts (Malay Studies) (NUS).

Students who have done well in this subject are eligible for MTL Bonus Points (2 points for at least an E grade) if they choose to pursue the following Mother Tongue-related subject concentrations in local universities:
• Malay Studies
• South Asian Studies
• Communication Studies
• Linguistics and Multilingual Studies
• Arts (Education) with specialisation in Malay Language and Literature

Course Requirements at MI
Students must have obtained A1 in Malay Language at the GCE O-Level examination or at least C6 in Higher Malay at the GCE O-Level examination.

Students who obtained A2 in Malay Language at the GCE O-Level examination will have to pass a diagnostic test that will be assessed holistically.

Instructional Objectives
On successful completion of this subject, a student should be able to:
• Understand linguistic and literary concepts;
• Critically analyse texts using key concepts;
• Present ideas coherently in written form; and
• Understand and appreciate the Malay culture.

Lesson Delivery and Expectations
Lessons for H2 Malay Language and Literature will usually take the form of tutorials in a classroom setting. Mini projects, class discussions and oral presentations are some regular activities in lessons to engage students through an authentic learning experience. Students will be required to participate actively in all class discussions. Submission of any take-home assignments must be punctual, as required by the subject tutor.

Enrichment Opportunities
Students will be given a wide range of enrichment opportunities including the annual Pre-University Seminar, the Mother Tongue Languages Fortnight, inter- and intra-school activities and competitions, workshops and Learning Journeys.

Reference and Learning Materials
Resource Packages will be provided by the respective subject tutors during the course of study. Compulsory texts for Paper 3: *Jendela Menghadap Jalan (Edisi Murid)* by Ruhaini Matdarin (Utusan Publications and Distributors Sdn Bhd, Kuala Lumpur) and *Begitulah Kata-Kata* edited by Sae’da Buang (Marshall Cavendish Education, Singapore).

Information is accurate as at December 2017
Mode of Assessment
Internal assessments include active participation, assignments, tests, block tests, Promotional/Preliminary examinations, and mini projects.

A-Level Examination
H2 Malay Language and Literature consists of three papers. Paper 1 (Language) comprises two parts. In Part 1, students are required to write either a narrative, descriptive, argumentative, or graphic stimulus essay to demonstrate their competency in writing. Students are allowed to use dictionaries approved by the Ministry of Education. In Part 2, students are assessed based on their understanding and application of the language in comprehension, cloze passage, and vocabulary tests. Students are not allowed to use dictionaries in Part 2. The duration of Paper 1 is two hours and 15 minutes.

Paper 2 is an e-examination. Students are tested on their language skills through comprehension and commentary writing based on given texts. The duration of Paper 2 is one hour.

Paper 3 (Literature) is an open-book examination. This paper requires students to answer four questions based on the four genres that they will be exploring in their course of study: novel, short stories, poetry and drama. The duration of Paper 3 is three hours.

Course Requirements at MI

Pre-University Year 1:
• Kertas 1 & 2
  • Karangan (Bentuk naratif, deskriptif, argumentatif, dan rangsangan grafik)
  • Melengkakan Teks dan Komentari
  • Kefahaman dan Kosa kata
• Kertas 3
  • Konsep dan Pendekatan Kesusasteraan Melayu
  • Cerpen dan Sajak

Pre-University Year 2:
• Kertas 1 & 2
  • Karangan (Bentuk naratif, deskriptif, argumentatif, dan rangsangan grafik)
  • Melengkakan Teks dan Komentari
  • Kefahaman dan Kosa kata
• Kertas 3
  • Novel dan Drama
  • Cerpen dan Sajak

Pre-University Year 3:
• Kertas 1 & 2
  • Karangan (Bentuk naratif, deskriptif, argumentatif, dan rangsangan grafik)
  • Melengkakan Teks dan Komentari
  • Kefahaman dan Kosa kata
  • Ulangkaji
• Kertas 3
  • Novel, Cerpen, Sajak dan Drama
  • Ulangkaji
Management of Business is offered as a subject only at the H2 level. This syllabus is designed as an introductory business management subject and seeks to help students understand the principles of business management which they can apply to any field of studies or work in the future.

Students offering this subject will understand the role of business and its main activities in creating value for stakeholders. In order to make well-reasoned business decisions, students will learn business concepts and theories, as well as consider the perspectives of stakeholders, ethical concerns and external environmental factors. As they learn to make well-reasoned business decisions, students will develop analytical, evaluative and communication skills, as well as critical and innovative thinking.

Prerequisite for University Admission
H2 Management of Business is not a mandatory prerequisite subject for any university course.

Course Requirements at MI
There is no prerequisite for this subject.

Instructional Objectives
On successful completion of this subject, students should be able to:

• Develop an understanding of:
  (a) the role of business in creating value for stakeholders;
  (b) the decision-making process, taking into consideration perspectives of stakeholders and external environmental factor;
  (c) the tools to analyse the internal and external business environment;
  (d) the interrelationships among the four business functions; and
  (e) strategic management to gain and sustain long-term competitive advantage.

• Develop skills in:
  (a) interpreting, analysing and synthesising qualitative and quantitative business information for decision-making;
  (b) thinking critically and innovatively when evaluating business issues and situations;
  (c) making decisions to achieve business objectives; and
  (d) recommending and communicating strategies and decisions.

Lesson Delivery and Expectations
The course draws on business practices in local and global contexts. It is taught through a combination of theory, practical examples and application of case studies. Students offering the subject have the opportunity to apply business and management concepts to solve problems encountered by business, often in an imaginative and innovative manner.

Lessons will take the form of interactive lessons and class discussions, with projects and presentations to develop collaborative and communication skills. Students will be required to prepare for reading and tutorial assignments prior to lessons and participate actively in all class discussions. Assignments have to be duly submitted to meet subject requirements.

Students offering the subject are expected to embrace self-directed learning and expected to read widely both in the content area as well as in current affairs to better understand and be aware of issues that affect business practices. Students will find the knowledge, skills and qualities taught through Management of Business to be relevant, regardless of their interests and future endeavours.

Enrichment Opportunities
• Learning Journeys
• Business-related competitions such as the IE Global Business Challenge
H2 MANAGEMENT OF BUSINESS (9587)

Reference and Learning Materials
- Published articles from newspapers, journals, and magazines
- In-house Resource Packages

Mode of Assessment
Internal assessments include active participation, assignments, tests, block tests and Promotional/Preliminary examinations.

A-Level Examination
Students offering the subject will sit for two papers, each of which lasts for three hours. Each paper comprises two sections. Paper 1 consists of two data response questions in Section A and three essay questions in Section B, of which students are required to attempt only two questions. Paper 2 contains one compulsory case study based on an adapted business situation. Structured and essay questions will be set based on the case study; five compulsory structured questions in Section A and two compulsory essay questions in Section B which focus on strategic decision-making.

Subject Coverage
Pre-University Year 1:
- Business and the Environment
- Managing People

Pre-University Year 2:
- Managing People (continued)
- Marketing
- Operations Management

Pre-University Year 3:
- Finance
- Strategic Management

Information is accurate as at December 2017
The H1 Mathematics syllabus provides students with a foundation in mathematics and statistics for further studies in university. It is particularly appropriate for students without a background in GCE O-Level Additional Mathematics, because it offers an opportunity for them to learn important mathematical concepts and skills in algebra and calculus that are covered in Additional Mathematics. Students will also learn basic statistical methods, which are necessary for university courses in business and the social sciences.

**Prerequisite for University Admission**

A pass in H1 Mathematics is a mandatory prerequisite for the following university courses:

- NUS Environmental Studies, Computer Science, Information Security and Information Systems
- NTU Economics, Psychology and Biological Sciences

A pass in H1 Mathematics or GCE O-Level Additional Mathematics is a mandatory prerequisite for the following university courses:

- All NUS and NTU courses related to Business and Accounting
- NTU Maritime Studies and Sport Science & Management
- All SMU courses in Accountancy and Economics

**Course Requirements at MI**

There is no prerequisite for this subject.

**Instructional Objectives**

On successful completion of this subject, students should:

- Acquire mathematical concepts and skills to support their tertiary studies in business and the social sciences;
- Develop thinking, reasoning, communication and modelling skills through a mathematical approach to problem-solving;
- Connect ideas within mathematics and apply mathematics in the context of business and the social sciences; and
- Experience and appreciate the value of mathematics in life and in other disciplines.

**Lesson Delivery and Expectations**

Lessons for H1 Mathematics take the form of tutorials in a classroom setting. Lesson delivery consists of concept building and learning through extensive worked examples and practice questions, and is followed up with regular homework. Students are expected to complete all assignments diligently.

The main learning materials used throughout the two-year course are available for purchase at the Institute bookshop. The course also requires students to be familiar with the use of a graphing calculator, and students are expected to have access to one for all lessons.

**Enrichment Opportunities**

Students who possess a strong track record in the subject are eligible to participate in Project Ace, an enrichment programme targeted at further developing problem-solving skills in high-ability students that culminates in participation in the annual Australian Mathematics Competition.
Reference and Learning Materials
- Lecture notes and tutorials on a topical basis
- Revision workbooks

Mode of Assessment
Students are assessed in two main areas:
- Continual Assessment (Pre-University Year 1 only), consisting of:
  - Active participation
  - Assignments
  - Unit tests
  - Internal block test and examinations

A-Level Examination
Students will sit for one written three-hour paper, marked out of 100, as follows:
- Section A (Pure Mathematics: 40 marks) will consist of about five compulsory questions of different lengths and marks based on the Pure Mathematics section of the syllabus.
- Section B (Statistics: 60 marks) will consist of six to eight compulsory questions of different lengths and marks based on the Statistics section of the syllabus.

There will be at least two questions, with at least one in each section based on the applications of Mathematics in real-world contexts connected to business and the social sciences. Each question will carry at least 12 marks and may require concepts and skills from more than one topic.

Subject Coverage

Pre-University Year 1:
- Simultaneous Equations
- Exponential and Logarithmic Functions
- Graphing Techniques
- Equations and Inequalities
- Differentiation Techniques
- Differentiation Applications
- Integration Techniques
- Integration Applications
- Permutations and Combinations

Pre-University Year 2:
- Probability
- Binomial Distribution
- Normal Distribution
- Sampling
- Hypothesis Testing
- Correlation and Regression

Subject Coverage

Pre-University Year 1:
- Simultaneous Equations
- Exponential and Logarithmic Functions
- Graphing Techniques
- Equations and Inequalities
- Differentiation Techniques
- Differentiation Applications
- Integration Techniques
- Integration Applications
- Permutations and Combinations

Pre-University Year 2:
- Probability
- Binomial Distribution
- Normal Distribution
- Sampling
- Hypothesis Testing
- Correlation and Regression
H2 MATHEMATICS (9758)

The H2 Mathematics syllabus prepares students for a range of university courses, including Mathematics, Sciences and related courses, where a good foundation in mathematics is required. It develops mathematical thinking and reasoning skills that are essential for the further learning of mathematics. Through the application of mathematics, students also develop an appreciation of mathematics and its connections to other disciplines and to the real world.

Prerequisite for University Admission
A pass in H2 Mathematics is a mandatory prerequisite for the following university courses:
- All NUS and NTU Engineering courses
- NUS Business Analytics
- NTU Mathematical Sciences, Physics and Environmental Earth Systems Science

An grade in H2 Mathematics is a mandatory prerequisite for the NUS Economics and Law Double Degree.

Course Requirements at MI
Arts and Commerce students who wish to offer H2 Mathematics must have at least a C6 in Additional Mathematics.

Instructional Objectives
On successful completion of this subject, students should:
- Acquire mathematical concepts and skills to prepare for their tertiary studies in mathematics, sciences, engineering and other related disciplines;
- Develop thinking, reasoning, communication and modelling skills through a mathematical approach to problem-solving;
- Connect ideas within mathematics and apply mathematics in the contexts of sciences, engineering and other related disciplines; and
- Experience and appreciate the nature and beauty of mathematics and its value in life and other disciplines.

Lesson Delivery and Expectations
Lessons for H2 Mathematics take the form of tutorials in a classroom setting. Lesson delivery consists of concept building and learning through extensive worked examples and practice questions, and is followed up by homework. Students are expected to complete all assignments diligently.

H2 Mathematics is significantly more abstract and demanding than H1 Mathematics, and students offering the subject are expected not only to understand concepts more deeply, but also to be able to apply them appropriately in a wider variety of contexts.

The main learning materials used throughout the three-year course are available for purchase at the Institute bookshop. The course also requires students to be familiar with the use of a graphing calculator, and students are expected to have access to one for all lessons.

Enrichment Opportunities
All students without a C6 or better in Additional Mathematics are required to complete a bridging programme in Pre-University Year 1 and Pre-University Year 2 to facilitate their learning of H2 Mathematics.

Students who possess a strong track record in the subject are eligible to participate in Project Ace, an enrichment programme targeted at further developing problem-solving skills in high-ability students that culminates in participation in the annual Australian Mathematics Competition.
Reference and Learning Materials
• Topical lecture notes and tutorials
• Revision workbooks

Mode of Assessment
Students are assessed in two main areas:
• Continual Assessment (Pre-University Year 1 and Pre-University Year 2 only), consisting of:
  • Active participation
  • Assignments
  • Unit tests
  • Internal block test and examinations

A-Level Examination
Students will sit for two written three-hour papers, each carrying 50% of the total marks, and each marked out of 100, as follows:
• Paper 1 (three hours) - consists of ten to 12 compulsory questions of different lengths and marks based on the Pure Mathematics section of the syllabus.
  
  There will be at least two questions on the applications of Mathematics in real-world contexts, including those from the sciences and engineering. Each question will carry at least 12 marks and may require concepts and skills from more than one topic.

• Paper 2 (three hours) - consists of two sections, Section A and B, of which:
  • Section A (Pure Mathematics: 40 marks) will consist of four to five compulsory questions of different lengths and marks based on the Pure Mathematics section of the syllabus.
  • Section B (Probability and Statistics: 60 marks) will consist of six to eight compulsory questions of different lengths and marks based on the Statistics section of the syllabus.

  There will be at least two questions in Section

Subject Coverage

Pre-University Year 1:
• Graphing Techniques
• Equations and Inequalities
• Functions
• Sequences and Series
• Differentiation Techniques
• Differentiation Applications
• Maclaurin Series
• Integration Techniques

Pre-University Year 2:
• Integration Applications
• Differential Equations
• Vectors – Basic Properties, Scalar Product and Vector Product
• Vectors – Lines and Planes
• Complex Numbers

Pre-University Year 3:
• Permutations and Combinations
• Probability
• Discrete Random Variables
• Binomial Distribution
• Normal Distribution
• Sampling and Hypothesis Testing
• Correlation and Regression
H1 MOTHER TONGUE LANGUAGES (8621/8622/8623)

H1 Mother Tongue Languages (Chinese Language/Malay Language/Tamil Language) aim to develop proficient language users who can communicate effectively using their Mother Tongue in real-world contexts. There is an emphasis on interpersonal communication, listening and reading for comprehension, and being able to present in spoken and written forms. Students will continue to be exposed to cultures and values through language application.

Prerequisite for University Admission
A minimum ‘S’ grade for H1 Mother Tongue Languages is required for entry into any of the local universities. Those who have attained a D7 or better in Higher Mother Tongue language will be deemed to have met the Mother Tongue Language requirement and need not read H1 Mother Tongue at the GCE A-Level examination.

A good H1 pass in Chinese Language/Malay Language is a prerequisite for the Bachelor of Arts (Chinese Studies/Malay Studies) course at NUS if the student has not secured a GCE O-Level Higher Chinese/Higher Malay pass.

Students who have done well in this subject are eligible for Mother Tongue Languages Bonus Points (1 point for an A grade) if they choose to pursue the following Mother Tongue-related subject concentrations in local Universities:
• Chinese Studies
• Malay Studies
• South Asian Studies
• Communication Studies
• Linguistics and Multilingual Studies
• Arts (Education) with specialisation in Chinese Language and Literature
• Arts (Education) with specialisation in Malay Language and Literature

H1 Mother Tongue Languages (MTL) may be included in the computation of the University Admission Score. The better of the two scores (i.e. with and without MTL) will be the University Admission Score of the student.

Course Requirements at MI
Students must have attained at least a C6 or better for Chinese Language/Malay Language/Tamil Language or an E8 or better for Higher Chinese/Higher Malay/Higher Tamil in the GCE O-Level Examination. As Mother Tongue Language is an integral part of the GCE A-Level curriculum, H1 Chinese Language/Malay Language/Tamil Language cannot be replaced with another subject.

Instructional Objectives
On successful completion of this subject, a student should be able to:
• Communicate ideas and opinions about general issues effectively;
• Read and understand functional texts from any printed and electronic media;
• Present ideas coherently in writing; and
• Understand and appreciate the culture related to the Mother Tongue.
H1 MOTHER TONGUE LANGUAGES (8621/8622/8623)

Lesson Delivery and Expectations
Lessons for H1 Mother Tongue Languages will usually take the form of tutorials in a classroom setting.

Mini projects, class discussions and oral presentations feature regularly in lessons, much material of which is extracted from authentic contexts. Students will be required to participate actively in all class discussions. Submission of any take-home assignments must be punctual, as required by the subject tutor.

Enrichment Opportunities
Students will be given a wide range of enrichment opportunities including the MTL Fortnight, inter- and intra-school activities and competitions, Learning Journeys as well as the Conversational Chinese/Malay (CCM) Programme.

Reference and Learning Materials
Resource Packages will be provided by the subject tutors during the course of study.

Mode of Assessment
Internal assessments include: written assignments, active participation, tests and mini projects.

A-Level Examination
Students will sit for two papers. Paper 1 comprises two parts, of which Part 1 is Essay Writing and Part 2 is Comprehension and Language usage, including Cloze Passage, Grammar, Idioms, and Summary. Students are allowed to use dictionaries approved by the Ministry of Education for Part 1 only. The duration of the examination is one hour and 30 minutes for each of Part 1 and Part 2.

Paper 2 consists of Oral and Listening Comprehension examinations. The Oral examination takes ten to 15 minutes long, and includes a two-minute Oral Presentation followed by a Video-Based Conversation. The Listening Comprehension takes about 30 minutes, and consists of ten multiple choice questions.

Subject Coverage
• Core Modules
• Environment/Growing Up/Nation and Society/Culture and Recreation
• Elective Modules
• Music and Film Appreciation/Media and Internet
Students who offer a Non-Tamil Indian Language (Bengali/Gujarati/Hindi/Panjabi/Urdu) or a Foreign Language (Japanese/German/French) in lieu of Mother Tongue Language at GCE O-Level Examination will continue to offer a H1 Non-Tamil Indian Language (Bengali 8827/Gujarati 8828/Hindi 8829/Panjabi 8836/Urdu 8837) or Foreign Language (Japanese 8835/German 8833/French 8831) at the GCE A-Level examination.

**Prerequisite for University Admission**
Students are expected to achieve a minimum `S` grade for H1 Non-Tamil Indian Language (Bengali/Gujarati/Hindi/Panjabi/Urdu) or Foreign Language (Japanese/German/French) for admission into any of the local Universities.

**Course Requirements at MI**
Students need to register the subject at respective MOE Language Centres. Only marks provided by MOE Language Centres will be recorded and used for promotion purposes. Lessons at MOE Language Centres are compulsory and therefore students who are unable to attend due to valid reasons (such as being on Medical Leave or representing the Institute/Singapore in competitions) must produce supporting documents.

**Exemption from Mother Tongue Languages**
The Mother Tongue Language policy requires all students (including foreign students) to offer a Mother Tongue Language in addition to English. Students exempted from the Mother Tongue Language at the GCE O-Level Examination will be exempted from the Mother Tongue Language at the GCE A-Level Examination.

Returning Singaporeans and foreigners are required to apply to the Ministry of Education if they wish to offer H1 Non-Tamil Indian Languages (Bengali/Gujarati/Hindi/Panjabi/Urdu) or Foreign Languages (Japanese/German/French) or be granted exemption.

Students who offer Thai (Syllabus 3260) or Burmese (Syllabus 3249) in lieu of Mother Tongue Language at the GCE O-Level Examination are also required to apply for exemption as these subjects are not offered at the GCE A-Level Examination.

Students who have been officially exempted from reading a Mother Tongue Language are deemed to have met the MTL requirement for university admission.
Physical Education (PE) plays an important role in the physical growth and development of students. Through PE, students acquire the knowledge, skills, right attitudes and values towards the pursuit of a lifelong, physically active and healthy lifestyle. It also provides an avenue for students to express themselves through movement and physical activity for leisure and competition. In addition, PE provides a natural platform and valuable opportunities for character building and the development of self-management skills, social and collaboration skills.

Prerequisite for University Admission

PE is not a mandatory prerequisite subject for any university course.

Course Requirements at MI

There is no prerequisite for this subject, all students are expected to participate in Physical Education (PE) lessons.

Instructional Objectives

On successful completion of this subject, students should be able to:

• Acquire a range of movement skills to participate in a variety of physical activities;
• Understand and apply movement concepts, principles and strategies in a range of physical activities;
• Demonstrate safe practices during physical and daily activities with respect to themselves, others and the environment;
• Display positive personal and social behavior across different experiences;
• Acquire and maintain health-enhancing fitness through regular participation in physical activities; and
• Enjoy and value the benefits of living a physically active and healthy life.

Principles of Physical Education in MI

• Students to participate in two sports and games at basic level and one at extension level.
• Students to participate in one activity that is individual/dual in nature and a team activity.
• Students to play in reactional competitions. This is done through mass participation events such as Sports Fiesta, Mass Walk/Run and Inter-House Games.
• Students are given the opportunity to select from a range of activities provided by the school. This is done through the selection of their sports and game at extension level and Sports Elective Programme (SEP)

Lesson Delivery and Expectations

The PE Programme focuses on the acquiring of knowledge and skills required for lifelong pursuits. The programme equips students with the knowledge and skills to participate in healthy lifestyle programme, as well as developing ruggedness and resilience.

Lessons will be conducted at the various sports facilities, both indoor and outdoor, available in the Institute. Class size will range from 25 to 35 students for the various activities conducted. Students are grouped according to differing abilities and fitness levels for HPE lessons.

Subject coverage

• Selected sports skills (badminton, basketball, football, volleyball, touch rugby, frisbee, cricket, softball, netball, handball and tchoukball);
• Health and fitness management (including Physical Fitness Assessments and Health talks);
• Inter-class competitions and Team Building
• Sports Elective Programme (SEP)
The H1 Physics course aims to:

Firstly, promote interest in physics and build the knowledge, skills and attitudes necessary for students to become scientifically literate citizens who are well-prepared for the challenges of the 21st century.

Secondly, develop in students the understanding, skills, ethics and attitudes relevant to the practices of science, including understanding the nature of scientific knowledge, demonstrating scientific inquiry skills and relating science and society.

Thirdly, develop in students an understanding that a small number of basic principles and core ideas can be applied to explain, analyse and solve problems in a variety of systems in the physical world.

The ten topics in H1 Physics are organised into four main sections: Measurement, Newtonian Mechanics, Electricity and Magnetism, and Nuclear Physics. It is designed as a contrasting subject. Students are not required to sit for the Practical Exam.

Prerequisite for University Admission
H1 Physics is not a mandatory prerequisite subject for any university course.

Course Requirements at MI
Students are expected to have read Pure Physics or achieved at least a C6 in Combined Science (Physics/Biology or Physics/Chemistry) at the GCE O-Level.

Instructional Objectives
On successful completion of this subject, a student should be able to:
• Demonstrate knowledge and understanding in relation to:
  • scientific phenomena, facts, laws, definitions, concepts, theories;
  • scientific vocabulary, terminology, conventions (including symbols, quantities and units);
  • scientific instruments and apparatus, including techniques of operation and aspects of safety;
  • scientific quantities and their determination; and
  • scientific and technological applications with their social, economic and environmental implications.
• Use words or symbolic, graphical and numerical forms of presentation to:
  • locate, select, organise and present information from a variety of sources;
  • handle information, distinguishing the relevant from the extraneous;
  • manipulate numerical and other data and translate information from one form to another;
  • use information to identify patterns, report trends, draw inferences and report conclusions;
  • present reasoned explanations for phenomena, patterns and relationships;
  • make predictions and propose hypotheses;
  • apply knowledge, including principles, to novel situations;
  • bring together knowledge, principles and concepts from different areas of physics, and apply them to a particular context;
  • evaluate information and hypotheses;
  • demonstrate an awareness of the limitations of physical theories and models.
Lesson Delivery and Expectations
Lessons for H1 Physics will usually take the form of tutorials/lectures in a classroom setting. Laboratory demonstrations, mini projects, class discussions and presentations are some regular activities in lessons. While students are not required to sit for the Practical Exam, they will be required to carry out appropriate practical work to investigate scientific principles, work collaboratively in teams and engage in inquiry based learning. They will also use ICT to add value to learning activities, promote active participation and explore alternative platforms to share ideas and findings.

Students will be required to read the necessary notes before lessons, and participate actively in all class discussions. Submission of take-home assignments must be punctual, as required by the subject tutor. The quality of assignments submitted is also graded in continual assessment.

Enrichment Opportunities
Pre-University Year 1:
• Scientific Inquiry Workshops

Pre-University Year 2:
• NUS Demo Lab
• Scientific Inquiry Workshops

Reference and Learning Materials
• Resource Packages compiled by tutors

Mode of Assessment
Internal assessments include active participation, assignments, topical tests, block tests and Promotional/Preliminary Examinations. Small projects given can be assessed as components in Active Participation or Assignments.

A-Level Examination
H1 Physics students will sit for two papers. The duration of Paper 1 is one hour and the duration of Paper 2 is two hours.

Paper 1 consists of 30 compulsory multiple choice questions. All questions will provide four direct choice options as possible answers. Paper 2 comprises two sections. Section A will consist of a variable number of structured questions including one or two data-based questions, all compulsory. The data-based question(s) will constitute 15-20 marks. All questions must be answered. Section B will require students to answer one out of two 20-mark questions. The questions will require students to integrate knowledge and understanding from different areas of the syllabus.

Subject Coverage
Pre-University Year 1:
• Measurement
• Kinematics
• Dynamics
• Forces
• Work, Energy and Power

Pre-University Year 2:
• Motion in a Circle and Orbits
• Current of Electricity
• DC Circuits
• Electromagnetism
• Nuclear Physics
The H2 Physics syllabus has been designed to develop and extend the content coverage provided by the GCE O-Level. Students will be expected to have knowledge and understanding of physics at the O-Level, either as a single subject or as part of a balanced science course. Students may not concurrently offer physics at both the H1 and H2 levels.

The H2 Physics course aims to:

Firstly provide students with an experience that develops their interest in physics, and build the knowledge, skills and attitudes necessary for further studies in related fields.

Secondly, enable students to become scientifically literate citizens who are well-prepared for the challenges of the 21st century.

Thirdly, develop in students the understanding, skills, ethics and attitudes relevant to the practices of science, including understanding the nature of scientific knowledge, demonstrating science inquiry skills and relating science and society.

Fourthly, develop in students an understanding that a small number of basic principles and core ideas can be applied to explain, analyse and solve problems in a variety of systems in the physical world.

H2 Physics covers 20 topics under six sections (Measurement, Newtonian Mechanics, Thermal Physics, Oscillations and Waves, Electricity and Magnetism, and Modern Physics). In addition to the theory papers, students are also required to take a practical paper.

Prerequisite for University Admission
H2 Physics is a mandatory prerequisite for admission to the following courses in NUS and NTU:
- NUS Science (Physics), Chemical Engineering, Engineering Science, Environmental Engineering
- NTU Physics/Applied Physics, Physics with Mathematical Science Major.

Course Requirements at MI
Students are expected to have achieved at least C6 in Pure Physics or B4 in Combined Science (Physics/Chemistry or Biology/Physics) at GCE O-Level.

Instructional Objectives
On successful completion of this subject, a student should be able to:
- Demonstrate knowledge and understanding in relation to:
  - scientific phenomena, facts, laws, definitions, concepts, theories;
  - scientific vocabulary, terminology, conventions (including symbols, quantities and units);
  - scientific instruments and apparatus, including techniques of operation and aspects of safety;
  - scientific quantities and their determination; and
  - scientific and technological applications with their social, economic and environmental implications.
Lesson Delivery and Expectations

Lessons for H2 Physics will usually take the form of tutorials or lectures in a classroom setting. Laboratory experiments, mini projects, class discussions and presentations are some regular activities in lessons. Students are required to carry out appropriate practical work to investigate scientific principles, work collaboratively in teams and engage in inquiry-based learning. They will also use ICT to add value to learning activities, promote active participation and explore alternative platforms to share ideas and findings.

Students will be required to read the necessary notes before lessons, and participate actively in all class discussions. Submission of take-home assignments must be punctual, as required by the subject tutor. The quality of assignments submitted is also considered in continual assessment.

Enrichment Opportunities

Pre-University Year 1:
- Scientific Inquiry Workshops
- Learning Journey to Science Centre
- Institute of Bioengineering and Nanotechnology Youth Research Programme (for selected students)
- Physics Olympiad (for selected students)
- National Science Experiment Big Data Challenge (for selected students)

Pre-University Year 2:
- Scientific Inquiry Workshops
- NUS Demo Lab

Pre-University Year 3:
- Scientific Inquiry Workshops

Reference and Learning Materials

- Resource packages compiled by tutors
Mode of Assessment
Internal assessments include active participation, assignments, topical tests, block tests and Promotional/Preliminary Examinations. Small projects given form components under Active Participation or Assignment.

A-Level Examination
H2 Physics students will sit for three papers and a Science Practical paper. Paper 1 consists of 30 compulsory multiple choice questions. The duration of the paper is one hour. All questions will provide four direct choice options as possible answers.

Paper 2, of a duration of two hours, consists of a variable number of structured questions plus one or two data-based questions and will include questions which require candidates to integrate knowledge and understanding from different areas of the syllabus. All questions are compulsory and answers will be written in spaces provided on the question paper. The data-based question(s) will constitute 20–25 marks.

Paper 3, of a duration of two hours, consists of two sections, and will include questions which require candidates to integrate knowledge and understanding from different areas of the syllabus. All answers will be written in spaces provided on the question paper. In Section A, there are a variable number of structured questions, all compulsory. Section B consists of a choice of one from two 20-mark questions.

Paper 4, of a duration of two hours and 30 minutes, is a practical paper that will assess skill areas such as planning, manipulation, measurement and observation, presentation of data and observations, analysis, conclusions and evaluation. The assessment may also include questions on data-analysis which do not require practical equipment and apparatus. Candidates will be allocated a specified time for access to apparatus and materials of specific questions. Candidates will not be permitted to refer to books and laboratory notebooks during the assessment.

Subject Coverage
Pre-University Year 1:
- Measurement
- Kinematics
- Dynamics
- Forces
- Work, Energy and Power
- Current of Electricity
- DC Circuits

Pre-University Year 2:
- Temperature and Ideal gases
- First law of thermodynamics
- Motion in a Circle
- Gravitational Field
- Oscillations
- Wave Motion
- Superposition
- Electric Fields

Pre-University Year 3:
- Electromagnetic Induction
- Electromagnetism
- Alternating Currents
- Quantum Physics
- Nuclear Physics.

Information is accurate as at December 2017
Principles of Accounting (PAA) 9593 is offered as a subject at H2 level as one of the subjects in the Mathematics/Science group.

There are 3 Key Understandings:
1. Accounting information is used to support and facilitate decision-making.
2. Accounting is a language used to represent business economic activities.
3. Accounting is a measurement system of business economic activities.

Prerequisite for University Admission
H2 Principles of Accounting is not a mandatory prerequisite subject for any university course.

Course Requirements at MI
There is no prerequisite for this subject.

Instructional Objectives
The syllabus intends for students to develop the following skills:
- numeracy skill in detecting underlying patterns and relationships between financial numbers, and interpreting the patterns and relationships in relation to business economic activities;
- synthesis and presentation skills in the preparation of accounting information in a suitable form;
- analytical skill in breaking down business economic activities for their financial effects, in assessing financial impact for implications on the business, and in using financial information for decision-making; and
- evaluative skill in using financial information for decision-making.
- having integrity and being objective;
- being accountable and responsible for one’s actions;
- having a sense of social responsibility to act with due care; and
- being logical, methodical, consistent and accurate.

Lesson Delivery and Expectations
Lessons are conducted in the form of tutorials in a classroom setting. This will be followed by formative assessments including weekly tests to gauge student learning and facilitate the planning of future lessons based on continual feedback.

Suggested Resources:
4. Management Accounting for Decision Makers Peter Atrill and Eddie McLaney Pearson, 2015
H2 Principles of Accounting (9593)

Schemes of Assessment

Format:
The examination consists of two papers, Paper 1 and Paper 2, taken at separate sittings.

<table>
<thead>
<tr>
<th>Description</th>
<th>Duration</th>
<th>Weightage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper 1</td>
<td>3h</td>
<td>50%</td>
</tr>
<tr>
<td>This paper will test Financial Accounting. Section A (60 marks, 30%) 3 compulsory structured questions (20 marks each)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section B (40 marks, 20%) 1 compulsory scenario-based structured question (40 marks)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paper 1</td>
<td>3h</td>
<td>50%</td>
</tr>
<tr>
<td>This paper will test Managerial Accounting. Section A (60 marks, 30%) 3 compulsory structured questions (20 marks each)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section B (40 marks, 20%) 1 compulsory mini-case study (40 marks)</td>
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<td></td>
</tr>
</tbody>
</table>

Internal mode of assessment

Internal assessments include active participation, topical tests and assignments and Promotional/Preliminary Examinations.

Subject coverage

Pre-University 1:
- Types of Businesses
- Forms of Business Ownerships
- Business Economic Activities
- Elements of Financial Statements
- Accounting Equation
- Financial Statements
- Shareholders’ Equity
- Long-term and Short-term Borrowing
- Property, Plant and Equipment
- Income and Expenses
- Inventories
- Trade Receivables and Other Receivables
- Trade Payables and Other Payables
- Cash in Hand and Cash at Bank
- Correcting Accounting Errors

- Incomplete Records
- Accounting Principles
- Accounting Information System and Accounting Cycle
- Double-entry
- Measuring Economic Activities

Pre-University 2:
- Stakeholders and Decision-making
- Business Ethics
- Qualitative Characteristics of Useful Financial Information
- Financial Statements Analysis
- Cost-volume-profit Analysis
- Variance Analysis

Pre-University 3:
- Capital Investment Analysis
- Relevant Information for Decision-making
- Measuring Costs of Products, Services and Other Cost Objects
- Cost Flow in a Manufacturing Business
- Normal Job-costing System
- Budgeting

Information is accurate as at December 2017
Project Work is a learning experience that aims to provide students with the opportunity to synthesise knowledge from different disciplines, and critically and creatively apply it to authentic situations. Through this learning process, students acquire skills such as collaboration, communication and independent learning to prepare them for the dynamic challenges of the 21st century.

**Prerequisite for University Admission**
H1 Project Work is a requisite subject for admission into the local universities for school-based students.

**Course Requirements at MI**
There is no prerequisite for this subject. This subject is compulsory for all students.

**Instructional Objectives**
On successful completion of this subject, a student should be able to:

- Make links across different areas of knowledge and to generate, develop and evaluate ideas and information so as to apply these skills in a research area;
- Communicate effectively and to present ideas clearly and coherently to a specific audience in both the written and oral forms;
- Collaborate with others to achieve common goals; and
- Learn on his/her own, reflect on his/her learning and take appropriate actions for improvement.

**Lesson Delivery and Expectations**
Students will be grouped into groups of four or five, to research on one of two research tasks during a 28-week cycle beginning in February. A Supervising Tutor will be assigned to each group to guide students. Periods will be included in students’ timetables for them to meet their Supervising Tutors and for the learning of requisite skills.

Assessments, both on a group and an individual basis, will take place throughout the cycle. Students need to ensure submissions are punctual and feedback from the Supervising Tutor is acted upon promptly.

**Reference and Learning Materials**
Learning materials will be given to students during lessons and lectures.

**Mode of Assessment**
Students will be assessed on their performance both individually and as members of a group. The assessment is based on a written report (including a personal reflection) and an oral presentation.

**Subject Coverage**
Students in Millennia Institute will only read Project Work in Pre-University Year 2. The A-Level assessment for Project Work will also be carried out in Pre-University Year 2. Students will be taught how to:

- Analyse and evaluate ideas
- Generate ideas
- Organise ideas
- Substantiate Ideas
- Communicate and present ideas
H2 Tamil Language and Literature (9567) aims to develop students with a flair for and interest in the Tamil Language through greater exposure to the language, literature and culture. This subject consists of two components: language and literature. An emphasis is placed on the appreciation and understanding of texts and literary works through developing students’ analytical skills of various literary genres including the novel, short stories, poetry and drama.

Prerequisite for University Admission
Students who have done well in this subject are eligible for the MTL Bonus Points (2 points for at least an E grade) if they choose to pursue the following Mother Tongue related subject concentrations in local Universities:
• South Asian Studies
• Communication Studies
• Linguistics and Multilingual Studies

Course Requirements at MI
Students must have obtained at least A1 in Tamil Language at the GCE O-Level Examination or at least C6 in Higher Tamil at GCE O-Level Examination.

Students who obtain A2 in Tamil Language at GCE O-Level Examination will have to pass a diagnostic test that will be assessed holistically.

Instructional Objectives
On successful completion of this subject, a student should be able to:
• Understand linguistic and literary concepts;
• Critically analyse texts using key concepts;
• Present ideas coherently in written form; and
• Understand and appreciate the Tamil culture.

Lesson Delivery and Expectations
Lessons for H2 Tamil Language and Literature will usually take the form of tutorials in a classroom setting. Mini projects, class discussions and oral presentations are some regular activities in lessons to engage students through an authentic learning experience. Students will be required to participate actively in all class discussions. Submission of take-home assignments must be punctual, as required by the subject tutor.

Enrichment Opportunities
Students will be given a wide range of enrichment opportunities including the annual Pre-University Seminar, the Mother Tongue Language Fortnight, inter- and intra-school activities and competitions, workshops and Learning Journeys.

Reference and Learning Materials
Resource Packages will be provided by the respective subject tutors during the course of study. The prescribed texts are *Karithundu*, a novel by Dr. Mu Varadarajan, and *Light Over Water*, a collection of short stories, poetries and plays by local and international writers, as well as classical works from the Tamil Sangam period published by the National Arts Council.

Information is accurate as at December 2017
Mode of Assessment
Assessment includes written assignments, active participation, tests and mini projects.

A-Level Examination
H2 Tamil Language and Literature consists of three papers. Paper 1 (Language) comprises two parts. Part 1 is focused on Essay Writing, which requires students to write a narrative, descriptive, argumentative, or graphic stimulus essay to demonstrate their competency in writing skills. Students are allowed to use dictionaries approved by the Ministry of Education. Part 2 (Comprehension and Language usage) consists of questions that assess understanding and application of the language using a comprehension and a cloze passage. Students are not allowed to use dictionaries for Part 2 and Paper 2.

Paper 2 is an e-examination comprising comprehension, grammar and commentary writing, and students are required to type their responses into a computer.

Paper 3 (Literature) is an open-book examination. This paper requires students to answer four questions based on the four genres that they will be exploring in their course of study: the novel, short stories, poetry and drama. The duration for Paper 3 is three hours.

Subject Coverage and Calendar

<table>
<thead>
<tr>
<th>வளர்ச் செயல்கள் (Themes)</th>
<th>மலை குற்றங்களுக்கு நடைமையுடன் (Sub-themes)</th>
<th>கல்வி (Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. சொல்லிபருத்திகள்</td>
<td>தொகுதி பொருள்கள்</td>
<td>வரலாற்று விளையாட்டு</td>
</tr>
<tr>
<td>2. கொண்டு நூற்றும்</td>
<td>வல்லிவிட்டு சொல்லுகள்</td>
<td>கூற்றுச் சொல்லுகள்</td>
</tr>
<tr>
<td>3. காலத்தைக் குறிக்கும்</td>
<td>குறிப்பிட்டு பொருள்கள்</td>
<td>குறிப்பிட்டு பொருள்கள்</td>
</tr>
</tbody>
</table>

கடள் 3
1. மொழித்தமிழ் கலன்
2. மொழி – கருத்தருடன்
Mother Tongue Syllabus B (CLB8611/MLB8613/TLB8614) aims to equip students with skills that will help them to communicate confidently in their Mother Tongue. The use of ICT multimedia aids as well as the bilingual teaching approach will create an environment that is conducive to the development of basic skills of communication in students.

Prerequisite for University Admission
Mother Tongue Syllabus B is not a H1 or H2 level subject. Performance in the Chinese B/Malay B/Tamil B examination is indicated as Merit, Pass or Ungraded. Students who pass the Mother Tongue B will be deemed to have met the Mother Tongue Language requirement for admission to University. However, no consideration will be given in the computation of university admission score to any of the local universities.

Course Requirements at MI
Students who offer Mother Tongue Syllabus B at GCE O-Level will continue with Mother Tongue Syllabus B at GCE Level. Students who have read Mother Tongue at the GCE O-Level Examination and have attained a D7 and below are also allowed to take this subject.

Instructional Objectives
On successful completion of this subject, a student should be able to:
• Communicate ideas and opinions about issues around them;
• Read and understand functional texts from any printed and electronic media;
• Write simple functional texts with clarity; and
• Understand the culture of the Mother Tongue.

Lesson Delivery and Expectations
Lessons for Mother Tongue Syllabus B will usually take the form of tutorials in a classroom setting. Class discussions, role-play and oral presentations are some regular activities that are used to engage students through authentic learning experiences during lessons. Students will be required to participate actively in all class discussions. Submission of take-home assignments must be punctual, as required by the subject tutor.

Enrichment Opportunities
Students are given a wide range of enrichment opportunities including the Mother Tongue Language Fortnight and Learning Journeys.

Reference and Learning Materials
Resource Packages will be provided by the subject tutor during the course of study.

Information is accurate as at December 2017
Mode of Assessment
Internal assessments include written assignments, active participation, oral presentations and class tests.

A-Level Examination
Students will sit for three papers. Paper 1 tests Functional Writing, and requires students to write an email or blog entry. Students are allowed to use dictionaries approved by the Ministry of Education. The duration for Paper 1 is 50 minutes.

Paper 2 tests Comprehension and Language Usage, and consists of multiple choice questions on Cloze Passages, Grammar, Idioms and Vocabulary. Students are not allowed to use dictionaries. The duration for Paper 2 is one hour.

Paper 3 consists of Oral and Listening Comprehension tests. The Oral examination is about 15 minutes long, and includes a two-minute Oral Presentation followed by a Video-based Conversation. The Listening Comprehension examination is about 30 minutes long, and consists of 10 multiple choice questions.

Subject Coverage
• Core Modules
  • Environment/Growing Up/Nation and Society/Culture and Recreation
• Elective Modules
  • Music and Film Appreciation/Media and Internet
General Information
General Office Opening Hours:
Monday to Friday (excluding public holidays)
8.00 a.m. to 5.30 p.m.

Address
60, Bukit Batok West Avenue 8, Singapore 658965

Contact Information
Tel: (65) 6302 3700, Fax: (65) 6302 3767
Institute Website: http://www.millenniainstitute.moe.edu.sg/
E-mail: millennia_inst@moe.edu.sg

Getting Here
Bus Services
Bus stops nearest to Institute side gate along Bukit Batok West Avenue

By vehicle
From Changi via PIE, exit Jurong Town Hall Road (Exit 31), turn right into Bukit Batok Road, turn right to Bukit Batok West Avenue 3, and turn left to Bukit Batok West Avenue 8.

From Tuas via PIE, exit Jurong Town Hall Road (Exit 31), turn left into Bukit Batok Road, turn right to Bukit Batok West Avenue 3, and turn left to Bukit Batok West Avenue 8.

Information is accurate as at December 2017