

Master of Science in Artificial Intelligence in Medicine

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Lee Kong Chian School of Medicine, Nanyang Technological University offers a stackable postgraduate programme in Artificial Intelligence in Medicine, including a Graduate Certificate, a FlexiMasters pathway, and a full Master of Science (MSc) degree. The programme is designed to integrate cutting-edge AI technologies with medical science, drawing on NTU's strengths in both medicine and engineering. Through taught modules, project work, and clinical case-studies, students will gain both the theoretical foundations and the practical experience needed to develop, deploy, and evaluate AI tools in healthcare settings.

This programme is ideal for two main groups: (a) healthcare professionals—such as doctors, nurses, public health specialists—who want to deepen their ability to understand, use, and supervise AI in clinical or policy settings; and (b) engineers, data scientists, computer scientists who seek to specialise in healthcare applications of AI, and need grounding in clinical workflow, regulatory & ethical concerns, and collaboration with medicine. Tracks can be tailored to match prior experience: those from clinical backgrounds may focus more on healthcare systems, ethics, and implementation, while those from technical backgrounds may dive deeper into algorithm development, machine learning, and data engineering.

Graduates of the MSc AI in Medicine will be well-positioned for a range of roles at the interface of AI and healthcare. Possible career paths include clinical AI specialist, data scientist in health tech, medical device / diagnostics innovation, healthcare policy & regulation, research roles (e.g., academic, translational or clinical research), or roles in startups and industry deploying AI for patient care, medical imaging, digital health, epidemiology, or precision medicine. Additionally, the programme provides a strong foundation for further study such as PhD work in AI, biomedical informatics, or related interdisciplinary fields.

Artificial intelligence in the Lee Kong Chian School of Medicine

Lee Kong Chian School of Medicine at Nanyang Technological University is a forward-looking medical school embedded in a technological university environment. LKCMedicine is committed to integrating high-quality medical training, research and innovation, and translating biomedical discovery into clinical impact. Its culture is one of interdisciplinarity: medicine, engineering, data science, ethics, and health systems all work cooperatively to tackle real-world health challenges. Within LKCMedicine, the [Data Science & Artificial Intelligence \(DSAI\)](#) programme is dedicated to unlocking the potential of biomedical data using advanced analytics and state-of-the-art AI methods. DSAI works across a variety of life sciences and medical research areas, focusing on problems such as data integration, high-dimensional data, explainable AI, medical imaging analytics, and other domains where large or complex datasets occur.

To help translate research into practice and accelerate AI adoption in healthcare, LKCMedicine in partnership with NHG Health has established the [Centre of AI in Medicine \(C-AIM\)](#). Launched in September 2024, C-AIM brings together over a hundred researchers and clinicians, as well as academic and industry partners (locally and internationally), to work on priority clinical domains including mental health, elderly frailty, medical imaging, and cancer screening.

C-AIM's research focus is supported by themes such as human-AI interaction, implementation science, education & training, and clinical outcomes, ensuring that innovation is not only technically strong but also clinically relevant, ethical, trustworthy, and deployable in real-world settings.



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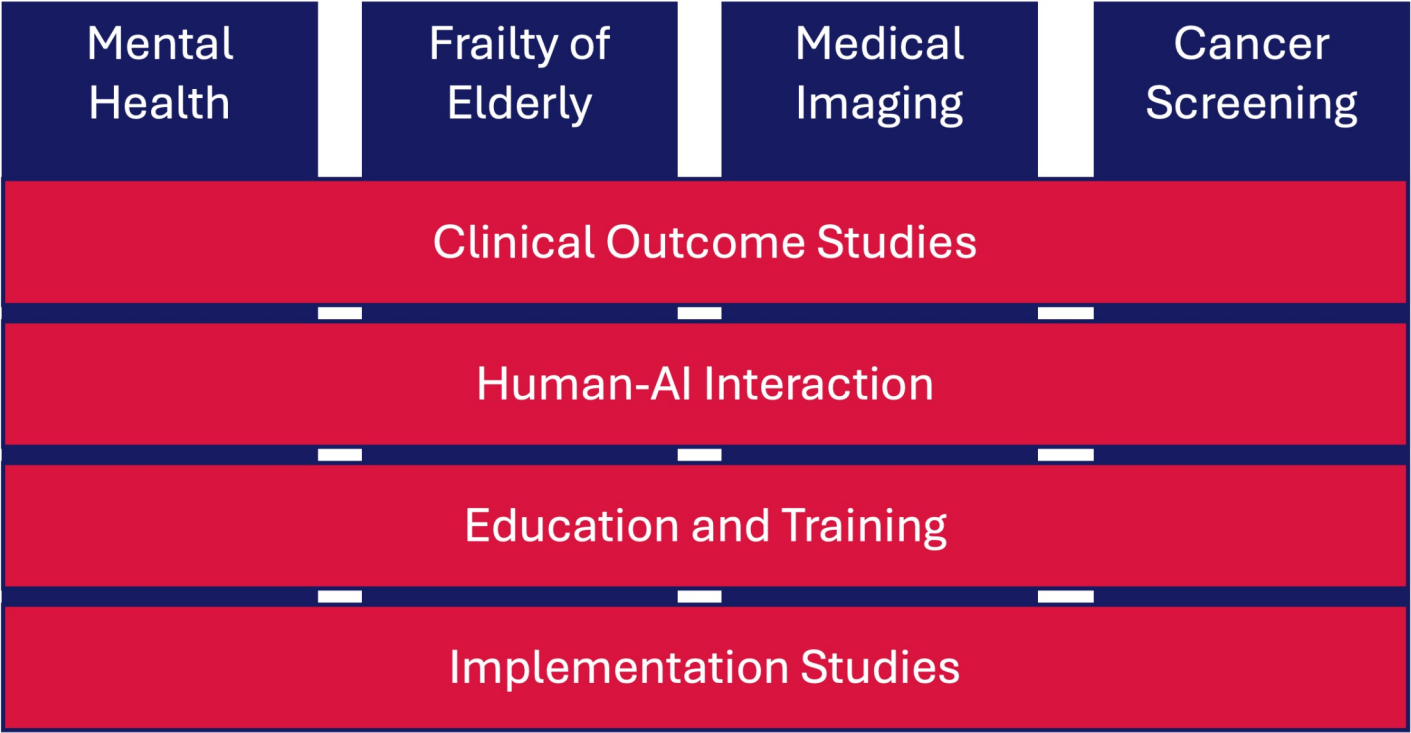
About Us

Research Focus

Our Centre prioritises four clinical domains: (1) Mental Health; (2) Frailty in the Elderly; (3) Medical Imaging; and (4) Cancer Screening. Each domain is in turn, supported by four research themes: (1) Clinical Outcomes Studies; (2) Human-AI Interaction; (3) Education and Training; and (4) Implementation Studies.

Our interdisciplinary approach brings together experts from various fields to address complex healthcare challenges. By integrating knowledge and methodologies from medicine, data science, engineering, and social sciences, we aim to develop innovative solutions that enhance patient care. Our research is designed to produce tangible benefits, such as improved diagnostic accuracy, personalised treatment plans, and more effective preventive measures.

Through rigorous investigation and collaboration, we strive to create AI-driven advancements that are not only cutting-edge but also practical and scalable. A critical component of our mission is to build trust in AI applications among users and the broader community. We prioritise transparency, ethical considerations, and user-centered design in our AI solutions to ensure they are trustworthy and widely accepted.



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Research Capabilities

GPU Compute Servers



Unlock the power of high-performance computing with our state-of-the-art GPU Compute Servers. Equipped with the latest GPU technology, our servers are designed to accelerate complex computational tasks and data-intensive research. Our GPU infrastructure provides the necessary power to handle the most demanding projects, such as deep learning experiments and big data analytics and advanced simulations.

Data Analytics



As the hub of data analysis specialised in medical applications at Nanyang Technological University, Singapore, our Centre provides support to our partners through a team of experts in statistics, machine learning, and data science. We offer high-level analysis capabilities, including predictive modelling, data visualisation of large-scale datasets, and comprehensive analysis of biological information. Our facilities are designed to handle the complexity and scale of medical data, enabling precise insights and fostering data-driven decision-making to advance healthcare research and practice.



Our Centre is equipped with state-of-the-art facilities and tools designed to support cutting-edge AI and machine learning (ML) applications and research. Our infrastructure enables a wide range of activities, from predictive modelling and large-language models for biological data to the analysis of real-world clinical and societal data. These capabilities ensure that our commitment to implementation science is robust, effectively bridging the gap between research findings and practical applications. By providing a comprehensive environment for innovation, we empower researchers to translate theoretical advancements into tangible solutions that improve healthcare outcomes and societal well-being.



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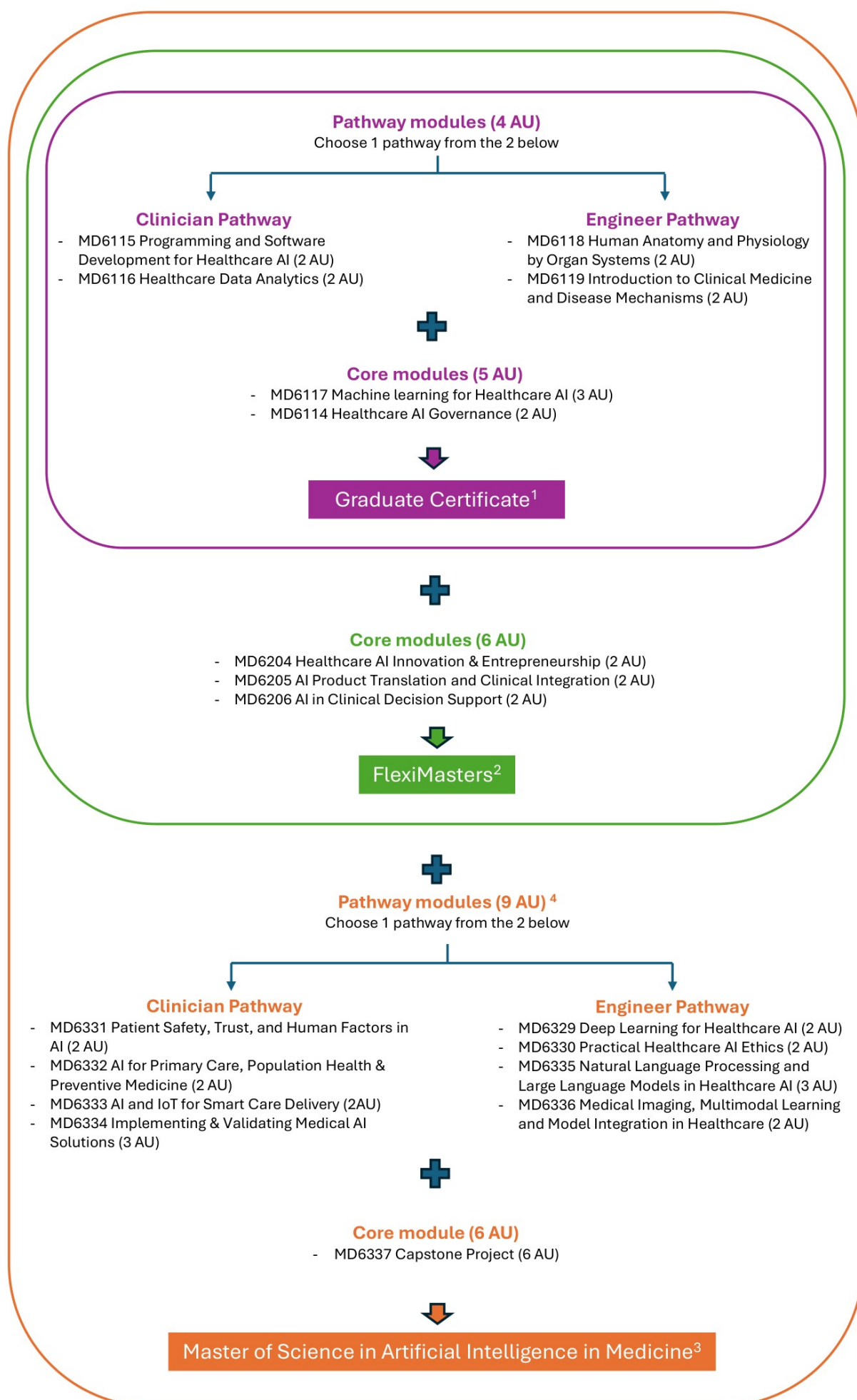
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The MSc in Artificial Intelligence in Medicine is organised into two distinct learning pathways, designed to reflect the different backgrounds and career goals of our students. Both pathways comprise a total of 30 Academic Units (AUs), and each culminates in a capstone project that allows students to integrate their learning and apply it to real-world healthcare challenges.



Notes:

¹ Students must complete a total of 9 AU to be awarded the Graduate Certificate

² Students must complete a total of 15 AU, Graduate Certificate (9 AU) and additional 6 AU to be awarded the FlexiMasters

certificate.
³ Students must complete a total of 30 AU, Graduate Certificate (9 AU) and FlexiMasters (6 AU) and additional 15 AU to be awarded the Master of Science in Artificial Intelligence in Medicine.
⁴ The pathway selected must be the same as the pathway completed in Graduate Certificate

Applied Medical AI (Clinician Pathway)

The Clinician Pathway is tailored for doctors, nurses, and other healthcare professionals who wish to gain a deeper understanding of how AI can be integrated into clinical practice. Students begin with **Medical AI Core Courses** (11 AUs), which establish a solid grounding in the principles of AI for healthcare. This is complemented by **Data Science Foundation Courses** (4 AUs), providing essential skills in analytics and computational thinking. Building on this foundation, students progress to **Applied Medical AI Courses** (9 AUs), which focus on practical applications such as decision support, healthcare data analytics, and AI for population health. The pathway concludes with a **Capstone Project** (6 AUs), where participants work on an applied problem, often linked to clinical contexts or healthcare systems.

Engineering Medical AI (Engineer Pathway)

The Engineer Pathway is designed for computer scientists, engineers, and data scientists who want to specialise in healthcare applications of AI. Like the Clinician Pathway, it begins with **Medical AI Core Courses** (11 AUs), ensuring all students share a common foundation in the fundamentals of AI in medicine. Instead of data science foundations, engineers take **Medicine Foundation Courses** (4 AUs), which introduce clinical workflows, disease mechanisms, and healthcare system structures—providing the context necessary to design meaningful solutions. Students then advance to **Advanced Medical AI Courses** (9 AUs), which cover topics such as deep learning for medical imaging, multimodal model integration, and natural language processing for healthcare. The pathway concludes with the **Capstone Project** (6 AUs), where students tackle research or translational challenges at the interface of AI and medicine.

Applied Medical AI (Clinician Pathway)	Engineering Medical AI (Engineer Pathway)
Medical AI Core Courses (11 AUs)	Medical AI Core Courses (11 AUs)
Data Science Foundation Courses (4 AUs)	Medicine Foundation Courses (4 AUs)
Applied Medical AI Courses (9 AUs)	Advanced Medical AI Courses (9 AUs)
Capstone Project (6 AUs)	Capstone Project (6 AUs)

Admission Criteria



Applicants should hold a bachelor’s degree in a relevant discipline, including but not limited to Medicine, Biomedical

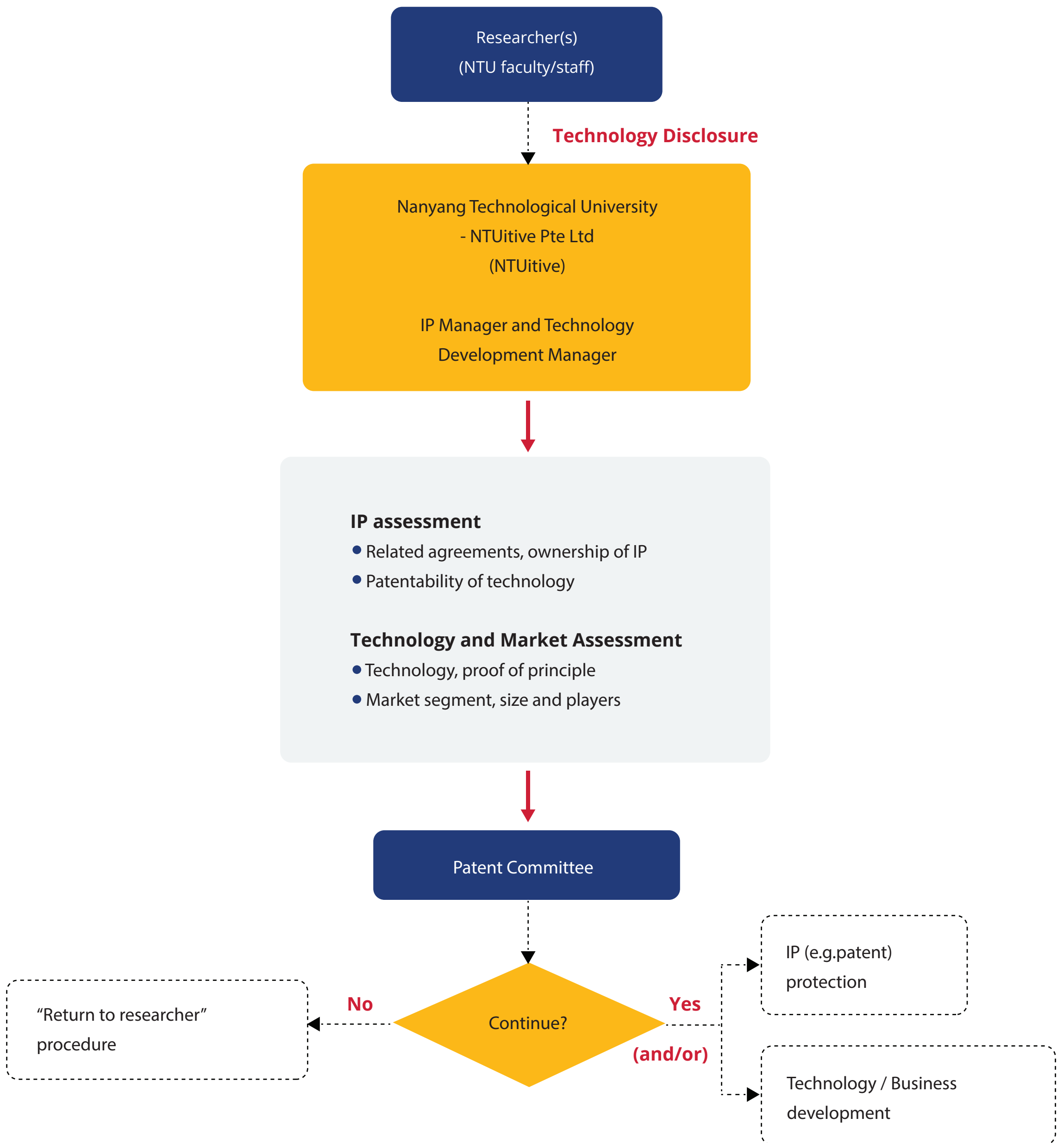
Sciences, Computer Science, Engineering, or related fields. Entry may also be granted through successful completion of the AI in Medicine Graduate Certificate and/or FlexiMasters pathway. International applicants whose undergraduate education was not conducted in English are required to provide evidence of English language proficiency. Acceptable qualifications include the Test of English as a Foreign Language (TOEFL) with a minimum score of 100, or the International English Language Testing System (IELTS) with a minimum overall band score of 6.5. All test results must be valid within two years of the date of application.

Tuition Fees



Full Time Programme	Fees	Location Of Study
Master of Science in AI in Medicine (30 AUs*)	\$60,000 <i>excludes GST, all course materials and books</i>	Singapore

Part Time Programme	Fees	Location Of Study
Graduate Certificate (9 AUs)	\$18,000 <i>excludes GST, all course materials and books</i>	Singapore <i>(for practical components of programme)</i>
<u>FlexiMasters (6 AUs)</u>	\$12,000 <i>excludes GST, all course materials and books. Does not include Graduate Certificate course Fees of \$18,000</i> <i>Learners must complete the Graduate Certificate before undertaking the FlexiMasters. The programme fees are reviewed annually and may be revised. The University reserves the right to adjust the programme fees without prior notice.</i>	Singapore <i>(for practical components of programme)</i>
Master of Science in AI in Medicine (15 AUs)	\$30,000 <i>excludes GST, all course materials and books. Does not include Graduate Certificate and FlexiMasters course fees of \$18,000 and \$12,000 respectively</i> <i>Learners must complete the Graduate Certificate and FlexiMasters before undertaking the Master of Science , AI in Medicine. The programme fees are reviewed annually and may be revised. The University reserves the right to adjust the programme fees without prior notice.</i> <i>\$5,000 deposit required – This amount will be deducted from the full billing of the course. Non-refundable & non-transferable (Payable upon acceptance of offer of admission)</i>	Singapore <i>(for practical components of programme)</i>



Based on the newly provided source document, the text you shared outlines the intellectual property (IP) commercialization and protection workflow for **Nanyang Technological University (NTU)**, managed by its enterprise company, **NTUitive Pte Ltd**.

Here is a breakdown of the IP and technology development procedure based on the document:

- Initiation (Technology Disclosure):** The process begins when NTU researchers (faculty or staff) formally submit a technology disclosure.
- Assessment Phase:** Once disclosed, the IP Manager and Technology Development Manager review the technology through two specific lenses:
 - Technology and Market Assessment:** They evaluate the technology itself, looking for a proof of principle, and analyze the commercial viability by identifying the market segment, market size, and key players.
 - IP Assessment:** They determine the patentability of the technology while reviewing related agreements and establishing the ownership of the IP.
- Decision (Patent Committee):** Following the assessments, a Patent Committee reviews the findings to decide whether to continue with the process.
- Outcomes:**
 - If Yes:** The technology moves forward into **IP protection** (such as filing a patent) and subsequent **Technology / Business development**.
 - If No:** The technology undergoes a “**Return to researcher**” procedure.

This workflow is designed to systematically evaluate whether a researcher's invention has the legal and commercial standing necessary for patenting and business development.

For NTUitive, the Technology and Market Assessment phase involves evaluating both the technical and commercial viability of a disclosed invention. Specifically, this process includes:

- **Evaluating the technology** to determine if there is a valid **proof of principle**.
- **Analyzing the market** by identifying the specific **market segment, overall market size, and key players** operating in that space.

This assessment is conducted by the IP Manager and Technology Development Manager alongside an IP assessment to help the Patent Committee decide whether to proceed with protecting and developing the technology

During the **IP assessment** phase of the NTUitive workflow, related agreements and intellectual property (IP) ownership are evaluated by the IP Manager and the Technology Development Manager.

Alongside checking agreements and establishing who owns the IP, these managers also assess the overall patentability of the disclosed technology. Once this evaluation—as well as the parallel Technology and Market Assessment—is complete, the findings are presented to the Patent Committee. The committee then uses this information to decide whether to proceed with formal IP protection and business development, or to initiate a "return to researcher" procedure