

Curriculum of T3M Programme

Core IPM & Law Module Group:

Code	Title	Aim	Objective	Scope (but not exclusive)
Core IPM & Law Module Group				
TTM101	Introduction to IP	Provide an overview of the types of intellectual property rights and help participants understand the fundamental concepts of intellectual property management.	Participants will be equipped with fundamental knowledge of the seven intellectual property rights.	Definition & Overview of IP Rights, Confidential Info, Copyrights, Patents, Trade Mark, Overlap of IP Rights
TTM102	Commercial Law Introduction (E-Learning)	Provide an overview of contract and 3 types of commercialisation agreement.	Participants will be equipped with fundamental knowledge of contracts and the 3 types of commercialisation agreement.	Fundamentals of Contract, Non-Disclosure Agreement (NDA), Materials Transfer Agreement (MTA), MOU, LOI, and Research Collaboration Agreement (RCA)
TTM103	IP Assessment Overview	Introduce Intellectual Property Assessment	Participants are expected to identify inventions, conduct prior art search, interact with inventors and evaluate technology disclosures under supervision	Capturing the invention - Technology Disclosure, Concept of Patentability, Prior Art Searching (PAS), Resources for PAS, Interviewing Inventors, Documentation (e.g. TDAP)

Core modules are compulsory for all. Elective modules are compulsory for those who specialise in that specific area group.

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Core IPM & Law Module Group				
TTM104	Basic Legal Training (a series of talks and seminar)	Help participants to achieve a good foundational understanding of the legal instruments used for technology and research commercialization, and the common issues that come with these instruments.	<p>Participants will be able to comprehend the rationale behind key legal clauses in a Research Collaboration Agreement, License Agreement, Non Disclosure Agreement, Material Transfer Agreement, Open Source Licensing, Warranties, Indemnities and Limitation of Liability, and US Export Control.</p> <p>With this comprehension, the participants would be more effective in constructing and facilitating commercialisation and licensing deals.</p>	Research Agreement, License Agreement, Non-Disclosure Agreement (NDA), Material Transfer Agreement (MTA), Open Source Licensing, Warranties, Indemnities and Limitation of Liabilities, US Export Control
TTM115-1	Boot Camp on IP Management (1)	Provide participants opportunities to be equipped in IP management	Participants will be equipped in different aspects of IP management	Actual scope will be worked out with partners. Focus will be on IP management.
TTM115-1	Boot Camp on IP Management (2)	Provide participants opportunities to be equipped in IP management	Participants will be equipped in different aspects of IP management	Actual scope will be worked out with partners. Focus will be on IP management.

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Elective IPM & Law Module Group:

Code	Title	Aim	Objective	Scope (but not exclusive)
Elective IPM & Law Module Group				
TTM201	Introduction to IPM Systems and Processes – Part 1	Provide participants an in-depth knowledge of the different type of patent regimes, to be sensitive to the timelines and actions encountered in lifetime of a patent, and to be exposed to data management.	Participants will have (1) An appreciation of the different patent regimes and how it can be utilized to its full advantage. (2) An understanding of how the patent regimes (especially Singapore) are intertwined. (3) Knowledge of how to manage the patent information and data.	Continuation & Reinforcement of TTM 103, Type of Patent Applications, Knowledge of patent prosecution timelines (of various jurisdictions, eg. PCT & SG as well as the related formality requirements), Database Management System (e.g. IMS)
TTM202	Introduction to IPM Systems and Processes – Part 2	Provide participants an introduction to A*STAR IP and IPM policies, TD evaluation process, Extramural grant manuscript review, various work of IPM officer like reviewing patent specification, work with patent agents and processing Office Action/ Written Opinion.	Participants are expected to understand the A*STAR IP and IPM policies, TD evaluation process, Extramural grant manuscript review, as well as how an IPM officer works with patent agents, review patent specification and processing Office Action/ Written Opinion.	Continuation & Reinforcement of TTM 117, Managing RI/extramural/consortiums patent portfolio database and providing statistics, Reviewing patent specification drafts prepared by patent attorney/agent, Communication with patent attorneys/agents on prosecution, Processing Office Actions/Written Opinions and reviewing the responses prepared by attorney/agent

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Core Commercialisation Module Group:

Code	Title	Aim	Objective	Scope (but not exclusive)
Core Commercialisation Module Group				
TTM105	Essentials of Licensing	Introduce the basic concepts of IP licensing from the perspective of a publicly-funded research organisation.	Participants will have a fundamental understanding of (1) IP Marketing (2) Key Components of an IP Licence (3) Negotiations (4) Post-licensing Activities	IP Marketing & Key Components of an IP License, Negotiation and Post-Licensing Activities, 9-points in licensing
TTM106	Evaluation of Technology Disclosure	Introduce the basics of assessing the commercial potential of a Technology Disclosure and the due diligence process involved to decide on the filing and go-to-market strategy.	Participants will (1) assess to the commercial potential of Technology Disclosure using Technology Assessment and Patent Evaluation (TAPE) tool. (2) prioritize the Technology Disclosures for commercialization using Portfolio Analysis and Commercialization Evaluation (PACE). (3) leverage on TAPE & PACE tools to strategize and prioritize the go-to-market strategy.	Technology Assessment & Patent Evaluation, Portfolio Analysis & Commercialisation Evaluation
TTM107	Essentials of Technology Intelligence & Competitive Intelligence (TICI)	Introduce the basics of technology intelligence and competitive intelligence and how it supports business strategy and decision making	Participants will (1) gain hands-on experience in data and intelligence collection from web resources, market reports and databases, and online patent resources.	TICI Process and Methodology, TICI Analysis Tools, Issues & Challenges, TICI resources

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Core Commercialisation Module Group				
			(2) establish Key Intelligence Questions (KIQ) to drive successful TICI outcomes. (3) be equipped with analysis tools to support decision-making, e.g., SWOT, Competitor Analysis, Value Change Analysis, Trend Analysis, , etc.	
TTM108	Commercialisation Planning	Help participants understand the various options for technology commercialization and choose right way to commercialization.	Participant will be able to draft the commercialization plan for A*STAR Technologies.	Introduction to Technology Commercialisation, Research Collaboration Agreement, COT & Flagship, Evaluation of License, Drafting of Commercialisation Plan
TTM109	Technology Commercialisation (COT & Flagship)	Help participants understand the fundamental concepts of commercialization of technology(COT) and Flagship project to enable them to engage in COT/Flagship project management	Participant will be able to scope, draft proposal, get approval and manage COT/Flagship project.	Commercialisation of Technology and Flagship project proposal, project presentation and management
TTM110	IP Marketing Strategies & Tactics	Help participants understand the essentials of IP marketing and engagements with industry and potential licensees	Participants will (1) understand different IP marketing mechanisms and platforms. (2) learn how to prepare Technology Brochure (3) understand the challenges and opportunities in using IP exchanges. (4) learn how to leverage on exhibitions and IP marketplace to	IP Marketing mechanisms and platforms, essentials of technology brochures, IP exchanges, IP marketplace

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			promote technology.	
TTM111	Valuation of IP and Intangible Assets (S&E and BMS)	Introduce fundamentals of IP valuation	Participants will (1) know and understand the principles of valuation. (2) be able to perform a valuation in Excel. (3) apply valuation in negotiations.	Valuation Concepts, Valuation Methods, License Contracts, Advanced Valuation topics
TTM112	Project Management Workshop	Introduce fundamental concepts and processes of project management	Participants are expected to apply concepts and adopt processes of project management in their course of work.	Learn to execute Project Management
TTM115-2	Boot Camp on Commercialisation	Provide participants opportunities to be equipped in commercialisation.	Participants will be equipped in different aspects of commercialisation	Actual scope will be worked out with partners. Focus will be on Commercialisation
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Elective Commercialisation Module Group:

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Elective Commercialisation Module Group				
TTM203	Regulatory Consideration when Developing Therapeutics. Planning & Execution of Clinical Trials	Provide participants an appreciation of some of the key issues in planning and execution of clinical trial.	Participants will be able to appreciate some of the regulatory requirements in therapeutic drug development.	Regulatory Consideration when Developing Therapeutics Planning and Execution of Clinical Trials
TTM204	BMS Specific Knowledge	Provide participants the knowledge that is specific biomedical services.	Participants will be able to have an appreciation of specific biomedical services	Best Practices - Technology Evaluation and Commercialisation Process Flow, Technology Offer Preparation Process Flow Must Read Presentation - Venture Capital in Singapore Must Read Articles - Value Creation and Sharing among Universities, Biotech and Pharma

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Core Technopreneurship Module Group:

Code	Title	Aim	Objective	Scope (but not exclusive)
Core Technopreneurship Module Group				
TTM113	Business Planning & Elevator Pitch	Introduce essentials of business planning	Participants are expected to write business plan and perform elevator pitch	Introduction to Business Plan, Value Proposition, Business Model, Marketing Strategy, Product Strategy, Talent Management Strategy, Operation, How to make elevator pitch
TTM114	Fundamentals of Entrepreneurial Finance	This is an introductory module intended to provide students with an understanding of the characteristics of entrepreneurs, entrepreneurial opportunities and the entrepreneurial process. It seeks to give students an experiential, in-depth overview of the challenges involved in identifying and developing an opportunity for an entrepreneurial venture.	The central focus of the course is to gain an understanding of the financing of entrepreneurial ventures, including ways entrepreneurs identify and commit the necessary resources to create and finance their ventures. Consistent with financial theory, we will be evaluating decisions and alternatives on the basis of their impact on firm value.	Overview of entrepreneurial finance, Financial statements (P&L, Balance Sheet, Cashflow), Evaluation of financial performance, Venture Capital Funds, Guest Speaker (VC)
TTM115-3	Boot Camp on Technopreneurship (x4)	Provide participants opportunities to be equipped in techopreneurship.	Participants will be equipped in different aspects of technopreneurship	Actual scope will be worked out with partners. Focus will be on technopreneurship.

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Core Technopreneurship Module Group				
TTM116	Applied Entrepreneurial Finance	This is a follow-up module to TTM114 "Fundamentals of Entrepreneurial Finance" where the students will do a case study analysis on the situation of a start-up company.	The central focus of the module is where the students, working in small teams, will do a case study in which they will use the tools and frameworks taught in the module TTM114 "Fundamentals of Entrepreneurial Finance". To accomplish this objective, the case study addresses specific skills, concepts, and know-how relevant to Entrepreneurial Finance.	Case Study using the tools and frameworks taught in TTM114
TTM117	Career Management	This is an introductory module to familiarize students on how to manage successfully their career.	The central focus of the module is to emphasize the importance of planning personally and seriously a career path as an entrepreneurial manager in the business company.	Introduction to career management, Powerful goal setting, Developing self confidence, Conquering fear, Working with a terrible boss
TTM118	Self-Marketing	This is an introductory module to familiarize students on how to market themselves within their organization to their superiors, peers and staff.	The central focus of the module is to emphasize the importance of identifying one's abilities, strengths and weaknesses and employ them actively so that the various people in the organization accepts him/her as a useful and effective player in the organisation.	Part 1: Leadership styles, Emotional Quotient, Effective oral & written communication, Giving up bad habits, Managing authenticity Part 2: Self appraisal of abilities, strengths, & weaknesses, personal plan to improve & fit into organisation, discussion on progress made

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Core Technopreneurship Module Group				
TTM119	Entrepreneurial Marketing	This is an introductory module to familiarize students on Entrepreneurial Marketing.	The central focus of the module is to provide students with a framework with which to identify, innovate and create new business ventures as independent start-ups or within existing business organizations.	<ol style="list-style-type: none"> 1. What is Entrepreneurial Marketing 2. Market Definition, Customer Segmentation & Competition 3. Product, positioning and Price strategies 4. Promotion Strategies 5. Distribution Strategies

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Elective Technopreneurship Module Group:

Code	Title	Aim	Objective	Scope (but not exclusive)
Elective Technopreneurship Module Group				
TTM205	Incubation Management Workshop	Introduce essentials of incubation management	Participants are expected to have an appreciation of the role of incubators in regional or national innovation systems, the different types of incubation models, the process of incubation and the trends and issues that incubators face.	Roles and Types of Incubators, Incubation Process, Trends and Issues
TTM206	Angel Investment Management Workshop	Introduce essentials of angel investment management	Participants are expected to have an appreciation of an angel investment community and its set up.	Roles of Angel Investors, Network Effects, Angel Group Structure, Best Practices

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