

Bringing ideas to market: IP management | Syllabus

In this course, you will gain a business-oriented understanding of patents. Building from essential patent concepts, you will learn how to identify protectable inventions, make informed decisions on protection, and understand the role of patents within wider IP governance. You will also explore how to develop and implement an IP strategy, including IP rights management and commercialisation. The course includes dedicated case studies that apply these concepts to real-world situations such as venture financing, partnerships, technology transfer, acquisitions and portfolio management.

Modules		Topics covered	Case Studies	Key takeaways	
MODULE 1	Introduction to IP	- The nature of knowledge and know-how - Legally protecting intangible goods - Different types of IP rights and their uses - Benefits of IP rights	- Environmentally friendly closed-loop shower, invented by a European Inventor Award finalist - Woven carbon fibre materials with a range of applications, including to cover the rotor blades of Ingenuity, NASA's first helicopter deployed to Mars	- Knowledge and ideas have the characteristics of public goods (non-excludable, non-rivalrous). - In the knowledge economy, wealth creation is based on intangible resources. - Original ideas can be protected to secure ownership, including as a sound basis for sharing knowledge.	- IP can be used to create exclusivity, foster innovation and help attract funding. - A single product can be protected using different types of IP rights (IPRs). - Specific national and international regulations apply to each type of IPR.
	Patent essentials	- What is a patent - Role and relevance of patents - Patentability requirements - Exceptions and exclusions from patentability - The patent system and its role in fostering innovation and economic growth - Requirements for patent applications - What to consider before filing - What happens during the grant procedure	- A process for turning pineapple leaves into a sustainable alternative to leather, invented by a European Inventor Award finalist - Flexible solar cells for portable devices, invented by winners of the European Inventor Award	- Patent protection means an invention cannot be commercially made, used, distributed, imported or sold by others without the patent owner's consent. - The general principle is that breach of these conditions constitutes infringing. - An inventor intending to patent their idea must keep their invention secret at least until the application is filed.	- Patents foster innovation, commercial competitiveness and the dissemination of new technical knowledge. - Patentability requirements vary from country to country; the European Patent Convention (EPC) provides a comprehensive list of subject-matter excluded from patentability in Europe (Article 52, Article 53). - Though patent protection gives the patent owner an exclusive right, this right is limited both in territory and time.
MODULE 3	Developing an IP strategy	- The importance of IP strategy - IP rights management - Patent filing strategy and action - Costs and benefits of IP rights - Commercialising IP	- Flexible solar cells for portable devices, invented by winners of the European Inventor Award - Plus IP strategy aspects of: - Magnetic nanoparticles to diagnose disease, invented by a European Inventor Award finalist - A process for turning pineapple leaves into a sustainable alternative to leather, invented by a European Inventor Award finalist	- Successful IP strategy is both a consequence of and a strong impetus for your company's strategy. - It's important to have an IP strategy, and to implement it.	- There are many cost and benefit aspects to consider before devising your IP strategy and in particular before filing a patent application. - The decision to commercialise rests on a variety of considerations, including the size of your company.
	IP commercialisation and use of IPRs	- How IP can be commercialised - What it takes to come to a licence deal - How raising capital for a technology start-up is leveraged by patents	- Programmable LEGO robotic toys - Perceive3D surgical navigation device - Organic semiconductor - Green hydrogen from sunlight and air - Fastener invention - Gluten substitutes from corn - Stingray - eliminating sea lice from salmon fishing - Modified mRNA - Handheld manually guided effector - PURE Cotton wax"- Lely – cow-milking robot - AMSilk – spider silk fibres for shoes and nail polish - Lontra – blade air compressor - Perceive3D – imaging technology for surgeons - Optinose – curing airborne diseases - Baseclick – click chemistry - FLASH MRI – imaging of medical scans	- There are different ways of commercialising IP. - Licensing is a key commercialisation strategy. - Patents can attract venture capital funds and investors. - A business model will change when the company grows and so will the IP commercialisation.	- Decisions regarding IP commercialisation can be structured and systematically assessed. - The most successful commercialisation decision is a balanced one that delivers value for all stakeholders. - Patents are assets, providing sustainable business value, but can also be tools for leveraging negotiations. - Marketing and negotiating are important skills for a start-up seeking monetisation. - Patents are the backbone of commercialisation by a technical venture.
MODULE 5	IP in growth and market shaping	- Innovation capture and IP governance - IP management in acquisitions - IP as a strategic asset in venture financing - Standards and patents as a strategy for competitive advantage and market shaping	- Spin-off building quantum computers using individual atoms controlled by lasers as the core computing elements. - Offers quantum computing via on-site installations for major computing centres and cloud access for remote use. - Scales the business through strong IP management and investment, having raised over €125 million.	- IP turns innovation into value, but only with disciplined capture (early identification, disclosure, clear ownership) and strong governance. - Culture matters: consistently identify and protect inventions; avoid premature disclosure. - IP shapes financing outcomes: it affects investor's confidence, valuation and exit potential, so it must be robust and clearly communicated.	- In network markets, align patents with standards to balance adoption and value capture, shape markets and support funding. - Strategic alignment is the goal: firms that integrate IP into overall strategy convert innovation into sustained advantage and long-term value.
	IP in partnerships and technology transfer	- Partnerships and IP - How IP shapes innovation ecosystems - Scouting and assessment of technology - Technology transfer	- Start-up developing a new type of computer designed to tackle complex problems faster. - Uses carbon nanotubes to build more stable “quantum bits,” aiming to make quantum computers more reliable and scalable. - Provides a cloud emulator so companies can test quantum use-cases before the physical hardware is widely available.	- IP enables controlled openness: share knowledge without losing strategic control. - Value comes from orchestration: success depends on integrating external ideas effectively. - Ecosystems outperform firms: competitive advantage lies in managing networks, not just internal R&D. - Technology transfer bridges research and market: it converts ideas into commercial products through licensing, spin-offs, or partnerships.	- Technology scouting reduces risk: early assessment identifies novelty, market potential, and avoids wasted investment. - Not all ideas reach the market: the “valley of death” highlights the gap between early research and investable innovation. - IP and timing are critical decisions: what to protect, when to act, and how to commercialize determine success.
	Managing and valuing patent portfolios	- Patent portfolio management - Portfolio pruning - IP valuation	- Spin-off developing eco-friendlier fertilisers that aim to reduce pollution compared to traditional fertilisers. - Uses arginine to feed plants efficiently, supporting growth with less waste and reduced runoff. - Built a patent-backed platform that helped attract investment and expand from forestry into agriculture.	- Treat patents as strategic capital allocation decisions. - Separate evaluation from valuation. - Use multiple valuation approaches. - Prioritize portfolio quality over quantity.	- Make portfolio review continuous and data-driven. - Use pruning strategically and selectively. - Recognize patents as long-term innovation assets.

REQUIREMENTS	N/A
ASSESSMENT	Test with multiple-choice questions at the end of each module. Final exam consisting of a set of multiple-choice questions and an open question (250-500 words).
CERTIFICATION	EPO certificate to be downloaded after completion of all activities