

Please note: Patent law can be complicated, and this brief introduction can only provide a simplified overview. Please talk to the Research Commercialisation Manager responsible for your faculty to discuss your particular project details.

What is a patent?

A patent is a monopoly right granted by the state in exchange for an inventor disclosing enough information about their invention to enable others to be able to carry out the invention. A patent can therefore be used to prevent others doing certain acts in relation to an invention covered by a granted patent - e.g. making, offering or selling, using or importing patented product.

It is important to note that a patent application is not a granted patent, and it is illegal to misrepresent the status of a patent in a commercial setting. Patents are territorial, and it can take several years for a patent to reach grant in different jurisdictions and geographies.

I would like to patent something that has come out of my research, how do I know if it is patentable?

A patentable invention must be novel, inventive and capable of industrial application, i.e. being made or used in any kind of industry. Products, processes and methods can all be patented.

What are the exclusions to patentability?

The following are not considered inventions and are excluded from patentability:

- Medical methods of treatment or diagnosis, although medical devices and pharmacological substances and compositions are patentable.
- A discovery, scientific theory or mathematical method.
- Aesthetic creations – e.g. literary, dramatic, musical or artistic works are covered by copyright.
- Schemes, rules and methods for performing mental acts, playing games or doing business.
- Programs for computers which have no technical effect as a result of the program.
- Presentations of information.

What is “novelty”?

An invention (as defined in the claims of a patent specification) is novel or new if details of the invention have not been made publicly available before the patent application is filed. Publications include all matter (whether a product, a process, information about either, or anything else) which has been made available to the public (whether in the UK or elsewhere) by written or oral description, by use or in any other way prior to the patent application filing. Examples include scientific papers (including their abstracts), web publications, posters, oral

presentations and meetings that are not subject to confidentiality.

As soon as the details of your invention are publicly available, your idea is no longer new/novel and you cannot obtain a valid patent for the invention. It is therefore vital not to publish any details of an invention before filing a patent application.

Information that is confidential, i.e. where a person receiving the information is prohibited from freely distributing it, is not taken into account for assessing whether your invention is new. Check before submitting academic papers that all content will be kept confidential and mark the submission ‘Confidential’. It is preferable to file the patent application in advance of submission just in case, and please note that the process of approval and filing can take a few months to complete properly.

What is an “inventive step”?

Having established novelty, patent examiners then assess whether an inventive step is present. An invention is taken to involve an inventive step if it is not obvious to a person skilled in the art, i.e. a person skilled in the technical field of the invention. It is “the clever bit” in the work that you have done, and the presence of a single inventive step is sufficient – there is no requirement for an inventive staircase!

Patent Offices around the world have developed different legal tests in an attempt to provide a structured approach to the assessment of inventive step or “non-obviousness”. This centres around the inventive concept and the novel feature(s) in a patent claim, and whether these feature(s) constitute steps which would have been

obvious to the person skilled in the art or require any degree of inventiveness. Routine workshop developments or experiments that might be obvious to try in the hope of success are not inventive, whereas factors such as an unexpected technical effect, overcoming a technical challenge or that the invention solves a long held problem in the industry can indicate the presence of an inventive step.

What is contained in a patent application?

The specification of a patent application basically has two parts: the description and the claims. The purpose of the description is to describe the invention in enough detail to enable somebody skilled in the technical field of the invention to make a working copy of the invention.

The claims define the legal monopoly that is sought i.e. what you would like to be able to stop others from doing. Generally speaking, claim 1 relates to the core concept of the invention (e.g. a stapler). Claim 1 is followed by a number of dependent claims that each refer back to claim 1 and contain an additional feature (e.g. a stapler as defined in claim 1, wherein the stapler is formed of [further clever feature]). The purpose of the dependent claims is to provide a number of carefully crafted fall back positions that define the invention in more detail and which could be used to differentiate the claim from what is known, if necessary, whilst still providing useful protection.

How much information needs to be included?

The invention needs to be described in sufficient detail to enable a person skilled in the art to make a working copy of the invention. This is known as the “sufficiency” requirement. It is permissible to leave information gaps that a skilled person could fill using his common general knowledge (e.g. information found in relevant text books), but all the “new” and “clever” aspects of the invention should be described in as much detail as possible and there should be no gaps that cannot be filled by a small amount of routine experimentation.

Nothing can be added to a patent application once it has been filed, thus important gaps in the disclosure of a patent application cannot be remedied at a later date. The only remedy is to file a new patent application containing the additional information, which adds a problem that any public disclosures occurring between the filing date of the initial, insufficiently described, patent application and new, sufficiently described, patent application can be used to attack the new patent application.

The University has provided approval to file a patent application: what information should I prepare?

Please do not aim to write the patent specification yourself – this is a highly skilled task, which we use external Patent Attorneys for. We will have a meeting with the Patent Attorney and you should aim to gather information about the invention in advance.

The Patent Attorney will require:

- A completed invention disclosure form.
- Black and white line drawings preferably with no shading, so traditional engineering drawings. It is important that all drawings photocopy clearly otherwise the patent office is likely to reject them.
- Copies of any relevant prior art that we are aware of.
- Any data providing plausibility that the invention actually works.
- Additionally, a draft paper covering the invention or other information can also be helpful.

I am presenting my research at a conference in 2 months. Can we still file a patent application to my invention?

In this instance it is important to speak to the relevant Commercialisation Manager as soon as possible. Depending on the complexity of the invention, it may be possible to file an application before the conference, although it is never a good idea to rush filing a patent application – as stated above, you cannot add matter to the application once filed. Alternatively, you may need to omit key elements of your work in your presentation because anything you present will no longer be patentable.