MODULE ONE: INTRODUCTION TO INTELLECTUAL PROPERTY (IP) AND IP RIGHTS

UNIVERSITY OF TORONTO | Entrepreneurship

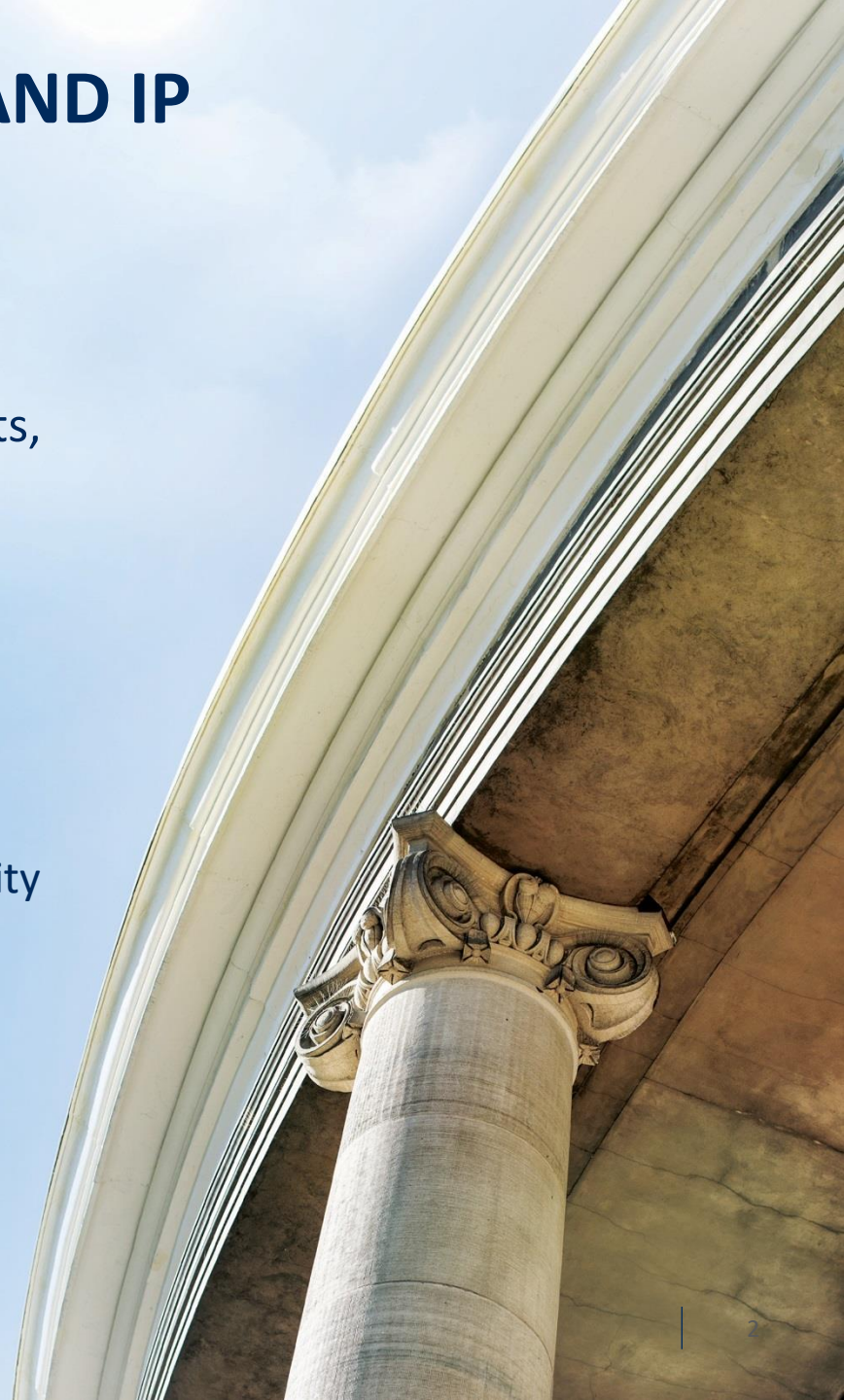
INTRODUCTION TO INTELLECTUAL PROPERTY AND IP RIGHTS

LEARNING OBJECTIVES

This training is targeted to a broad audience of staff, faculty and students, including students creating intellectual property in courses.

After completing this module, you will be able to:

- ✓ Define what intellectual property is
- ✓ Identify the types of IP rights
- ✓ Identify examples of how students and faculty are creating IP at the university



MODULE OUTLINE

1. Intellectual Property Explained
2. Understanding Patents
3. Understanding Copyright
4. Understanding Industrial Design
5. Understanding Trademarks
6. Understanding Trade Secrets
7. Open Source

INTELLECTUAL PROPERTY (IP) EXPLAINED

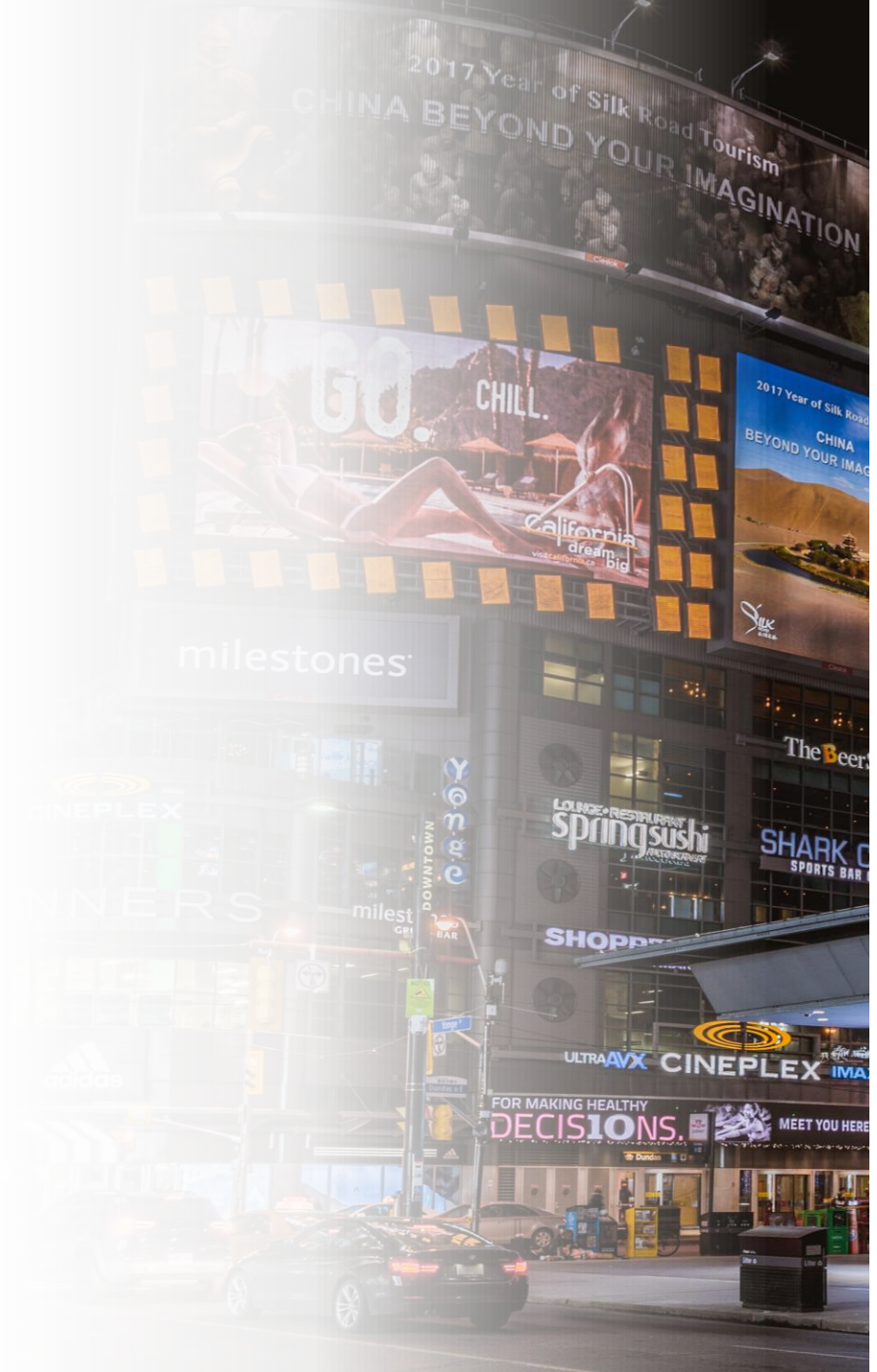
WHAT IS INTELLECTUAL PROPERTY (IP)?

IP is all around us. It is in the clothes we wear, the coffee we buy in the morning, the electronic devices we use every day and the music we listen to on the way to work.

Simply put, IP is an umbrella term that refers to **creations of the mind**.

IP is called "property" because rights are acquired with ownership but considered an **intangible asset** as opposed to a physical asset when owned by a business.

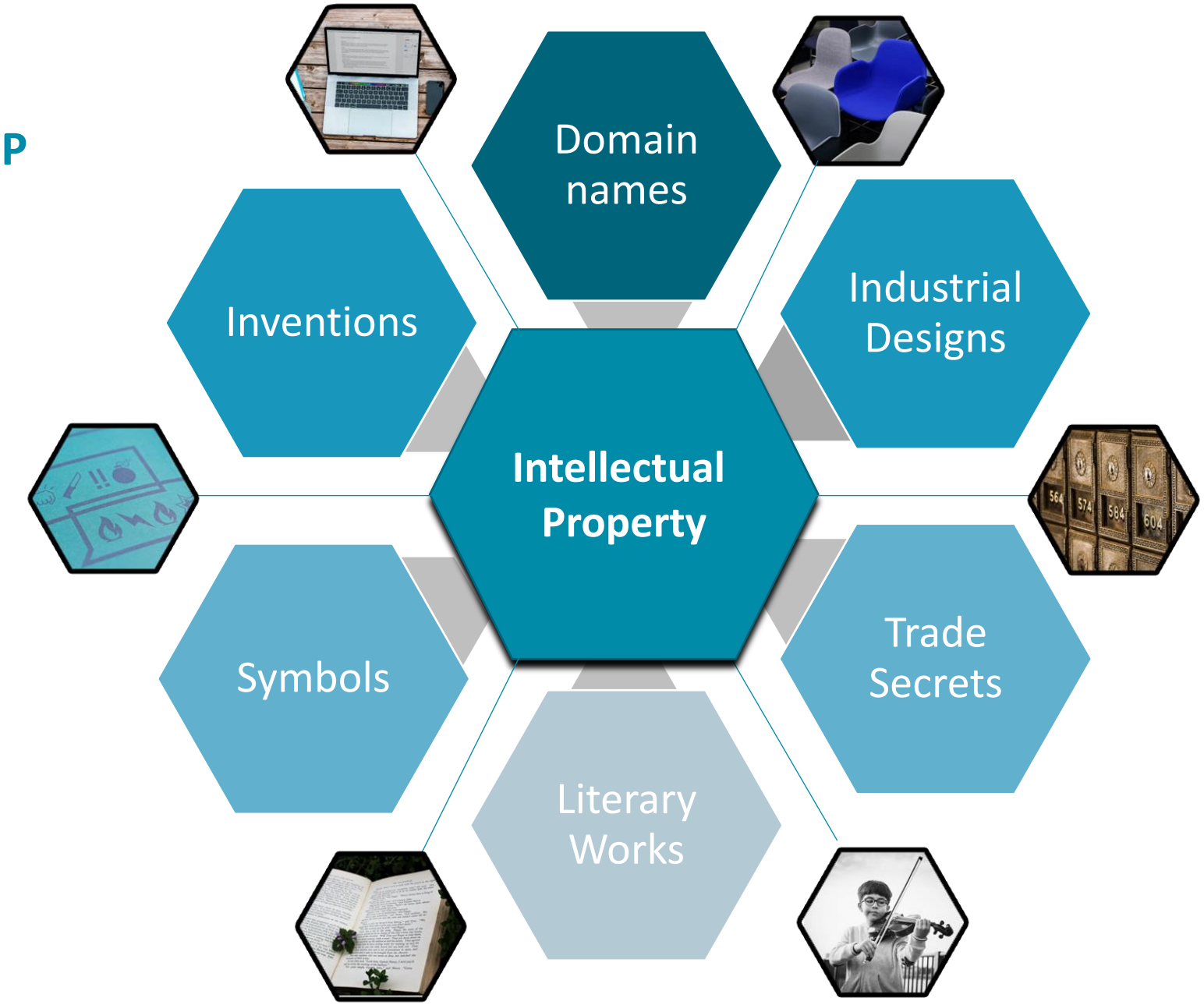
Under intellectual property law, owners are granted certain **exclusive rights** to a variety of intangible assets.



IP EXPLAINED

COMMON EXAMPLES OF IP

- Inventions
- Symbols
- Logos
- Pictures
- Designs
- Literary and artistic works
- Other representations used in commerce



IP EXPLAINED

EXAMPLES OF IP CREATED AT U OF T

There are many ways faculty and students create IP at the University. IP might be created through capstone projects and presentations, independent research or during an academic internship. Some examples include:

- Methods and processes:
  - a new user-friendly way of loading and unloading cargo from a delivery robot
  - designing a process or part of a process (e.g., volunteer sign-up process to support a not-for-profit)
- Product design:
  - mounting bracket for a water bottle designed to fit on the wheelchair and bed of a paraplegic client
  - designs for websites and mobile apps for startups and partners, including re-designing an existing out-of-date website or designing a brand-new website
  - new floor plan layout for a multifunctional room at a community centre to maximize flexibility
- Data and Plans
  - raw data and code, testing data, design files themselves
  - architectural, landscape architectural or urban design proposals
  - business development plans for startups and partners

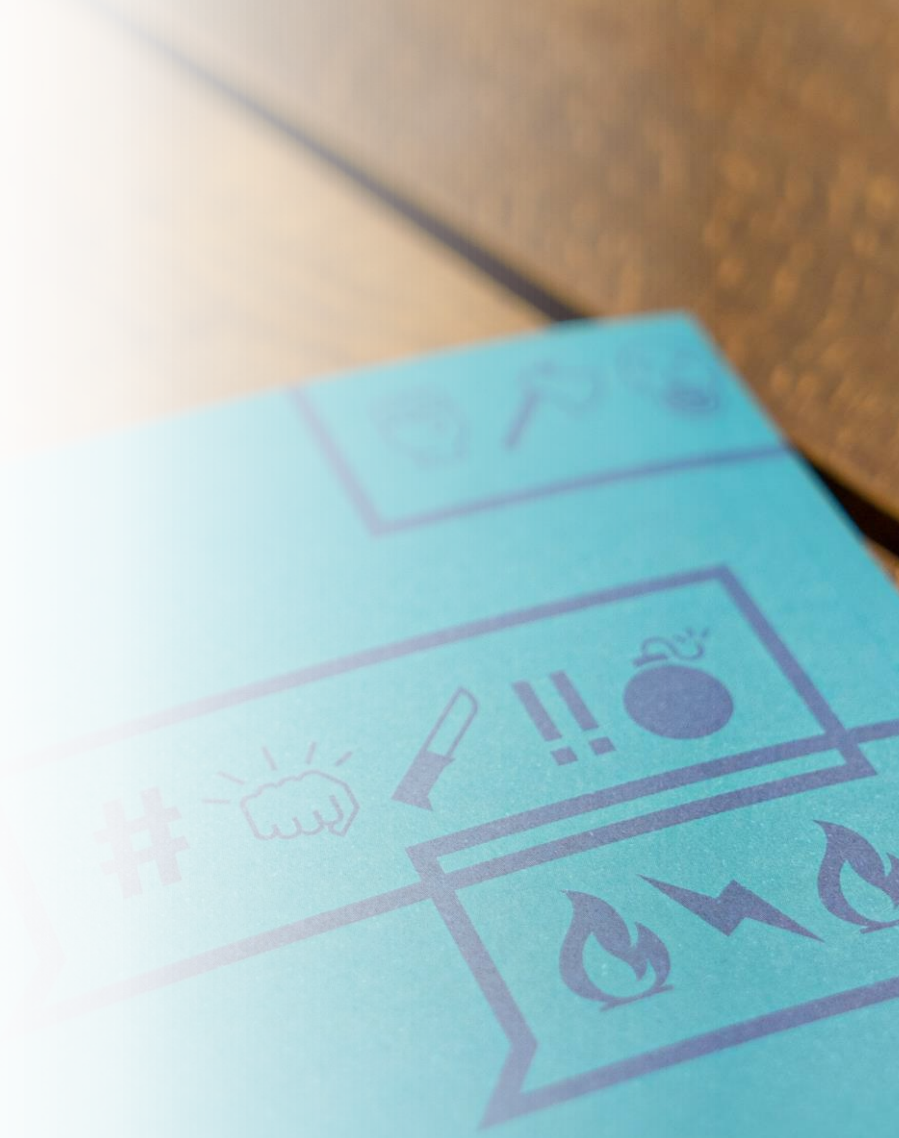
IP EXPLAINED

IP AND IP RIGHTS

There are different forms of IP rights.

IP rights, such as patents and trademarks, constitute the legal protection for your IP. They are an **exclusive right** that also serves as proof that you own the work and that it has become your property.

IP rights encourage innovation by providing creators, such as inventors and designers, with an exclusive right to **prevent others from stealing** or **taking credit** for their innovation.



UNDERSTANDING PATENTS

WHAT IS A PATENT?

A patent is a **form of intellectual property** granted by a government that confirms the **exclusive right** to an invention.

Patents protect **inventions**.

WHAT IS AN INVENTION?

An invention is a **new, inventive and useful solution** to a problem.

It can be a novel **art (the application of knowledge to affect a desired result), process, machine, manufacture, composition-of-matter** or **any improvement** thereon.

Inventions that meet the above criteria for patentability can be protected through patents.

UNDERSTANDING PATENTS

WHAT CAN BE PATENTED?

- Products / articles of manufacture
- Processes/methods
- Machines
- Compositions of matter

Virtual reality glasses

Distillery process and computerized method for bottling liquid

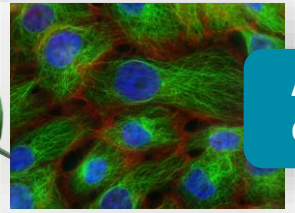
Sewing machine

Pharmaceutical product

UNDERSTANDING PATENTS

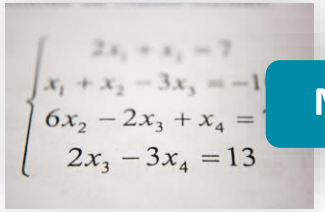
WHAT CANNOT BE PATENTED (IN CANADA)?

- Higher life forms



Animal, plant or cellular organism

- Mathematical formulas



Mathematical equation

UNDERSTANDING PATENTS

IMPROVING EXISTING INVENTIONS

An invention does *not* have to be an **entirely** new device, process or product.

It can be—and is most likely to be—an **improvement** to an existing invention.

About **90%** of patents are for **improvements** to existing patented inventions.

- Headphones have existed for a century but continue to evolve with technology.

UNDERSTANDING PATENTS

PATENT CRITERIA IN CANADA

The criteria for patentable inventions are found in the Patent Act, which is the federal legislation governing patent law in Canada.

How do you know if you have an invention eligible for a patent? Your invention must be **new, useful, non-obvious and be eligible subject matter.**

New / Novelty

Your invention must be the first of its kind in the world. It must not be known to the general public in writing or in any other form anywhere in the world before the application is filed.

Useful

Your invention must work at a practical level and have a useful function. Simply put, it has to have a use.

Non-obvious

Your invention must be something that a skilled person in the field would not have thought of.

Eligible Subject Matter

Your invention must be something that is allowed to be patented (e.g. products, processes, machines, compositions of matter.)

UNDERSTANDING PATENTS

PATENT RIGHTS

A patent grants you the right to **exclude** others from **making**, **using** or **selling** the invention in the country where your patent is granted.

This only applies to countries that have granted you a patent. There are no international patents and each country may differ in the criteria for patentability.

In many countries, including Canada, patents are valid for up to **20 years from the date you file your application**. A patent is *not* renewable, but maintenance fees or annuities may be due to maintain a patent.

CHECK FOR UNDERSTANDING

A Canadian patent can be granted to an invention if it is the first of its kind in Canada and is a new development or an improvement of an existing technology that would not have been obvious to someone working in your area of specialty.

A. True
B. False

CHECK FOR UNDERSTANDING

A Canadian patent can be granted to an invention if it is the first of its kind in Canada and is a new development or an improvement of an existing technology that would not have been obvious to someone working in your area of specialty.

A. True
B. False

Answer: B. The invention must be the first of its kind in the world.

UNDERSTANDING COPYRIGHT

WHAT IS COPYRIGHT?

Generally, copyright is the exclusive legal right to **produce, reproduce, publish or perform** an original artistic, literary, musical or dramatic work. It is generally recognized globally.

Copyright protection can be registered in Canada but is voluntary.

To register your copyright in Canada, you must file an application with the Canadian Intellectual Property Office (CIPO).

UNDERSTANDING COPYRIGHT

WHAT DOES COPYRIGHT PROTECT?

Copyright protects all **original works**, provided the conditions in the *Copyright Act* have been met. Original works are original expressions of an idea in an artistic, literary, musical or dramatic form.

Through copyright, authors have the right to **prevent others** from reproducing their work or copying any substantial portion of it.

Owning the copyright for a work means you have the exclusive right to **commercially benefit from its use**. Those who want to use your work will have to acquire the right or get your permission.

In Canada, an original work is automatically protected by copyright **upon its creation** in a **fixed** form. A work protected by copyright in Canada is also automatically protected in all *Berne Convention* member countries (the vast majority of the world's countries, including Canada).

UNDERSTANDING COPYRIGHT

MORAL RIGHTS

Copyright includes not only economic rights, but also moral rights.

Moral rights protect the author's right of:

Attribution	to be credited with the work, including anonymity or the use of pseudonyms
Integrity	the work cannot be modified or used in association with a product or service in a way that causes prejudice to the author’s honour or reputation

UNDERSTANDING COPYRIGHT

CONDITIONS FOR PROTECTION BY COPYRIGHT

A work must meet 3 conditions in order to be protected by copyright:

- **Originality** - The condition of originality means your work must be the result of your own creativity. Copying somebody else's work does not make your work original. You need to have used your skill and judgment to create the work.
- **Expression** - Copyright only protects the expression of an idea, not ideas by themselves. You have the copyright over a specific story in the way you chose to express it; however, you cannot stop anyone else from writing a book about the same idea.
- **Fixation** - Works must be fixed in a material format, such as paper, video recordings, audio recordings, hard drives and memory cards.

UNDERSTANDING COPYRIGHT

DISTINGUISHING AUTHORSHIP AND OWNERSHIP

The creator of an original work will **always remain its author**.

However, the author of the work may **not always be the owner**. Any other individual or legal entity could become the owner through a transfer of ownership of the work.

Distinguishing these 2 concepts is essential in fully understanding copyright protection, since the author is tied to the work. The author's life will always have a bearing on the duration of copyright protection.

UNDERSTANDING COPYRIGHT

DURATION OF COPYRIGHT PROTECTION

Copyright lasts for the life of the author, **plus 50 years** after the end of that calendar year.

When the term of the copyright protection ends or expires, the work falls into the **public domain.**

Any work in the public domain is accessible to the public, and everyone has an equal right to reproduce or republish the work.

Emily Carr's paintings are part of the public domain, as she passed away in 1945.

CHECK FOR UNDERSTANDING

A wildlife photographer sold a series of photos to a nature magazine. She signed an agreement which transferred ownership of her work to the magazine but chose not to waive her moral rights. Does the magazine have to credit her work when they publish the photographs in the next issue?

A. Yes
B. No

CHECK FOR UNDERSTANDING

A wildlife photographer sold a series of photos to a nature magazine. She signed an agreement which transferred ownership of her work to the magazine but chose not to waive her moral rights. Does the magazine have to credit her work when they publish the photographs in the next issue?

A. Yes
B. No

Answer: A. Moral rights, which include attribution, cannot be sold or given away unless they are waived.

UNDERSTANDING INDUSTRIAL DESIGNS

WHAT IS AN INDUSTRIAL DESIGN?

Simply put, industrial design is about how a product looks.

It consists of the **visual features** of shape, configuration, pattern, ornament or any combination of these features.

The design must be **novel** and **appeal to the eye**.

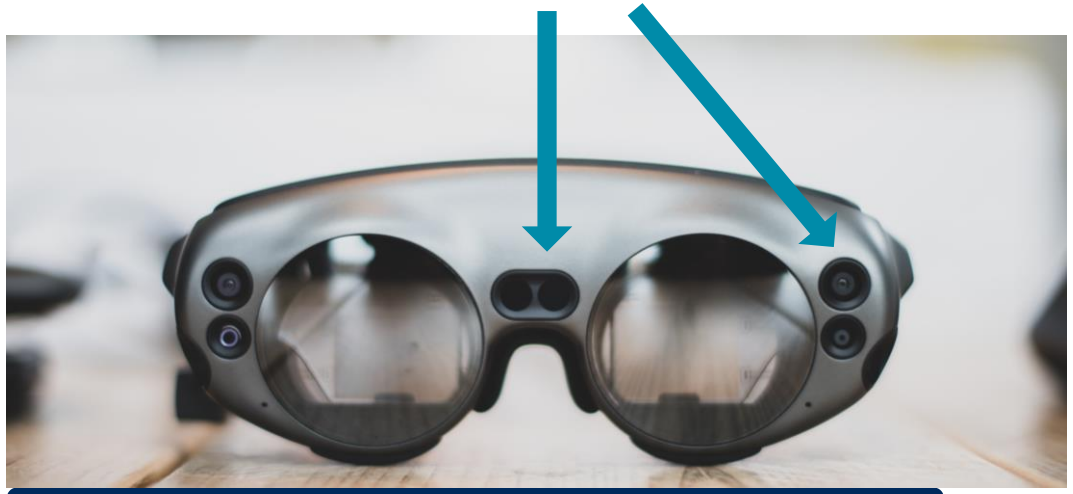
It must be applied to a finished article and the features can be 2- or 3-dimensional.

UNDERSTANDING INDUSTRIAL DESIGNS

INDUSTRIAL DESIGNS ILLUSTRATED

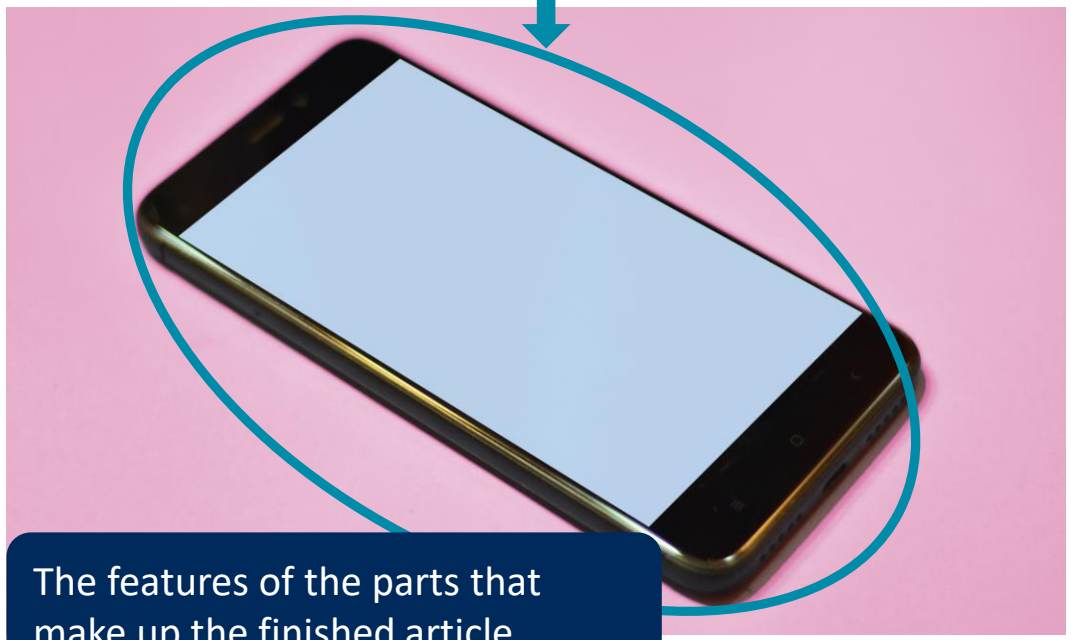
Features of **shape** and **configuration** refer to a finished article's 3-dimensional structure.

Shape



The external form or outline of the article

Configuration



The features of the parts that make up the finished article

UNDERSTANDING INDUSTRIAL DESIGNS

INDUSTRIAL DESIGNS ILLUSTRATED

Features of **pattern** and **ornament** are defined as 2-dimensional elements placed on a finished article for decorative purposes.

Pattern

Repeating decorative elements that are all the same

Ornament

Any other decorative element placed on the surface of the finished article

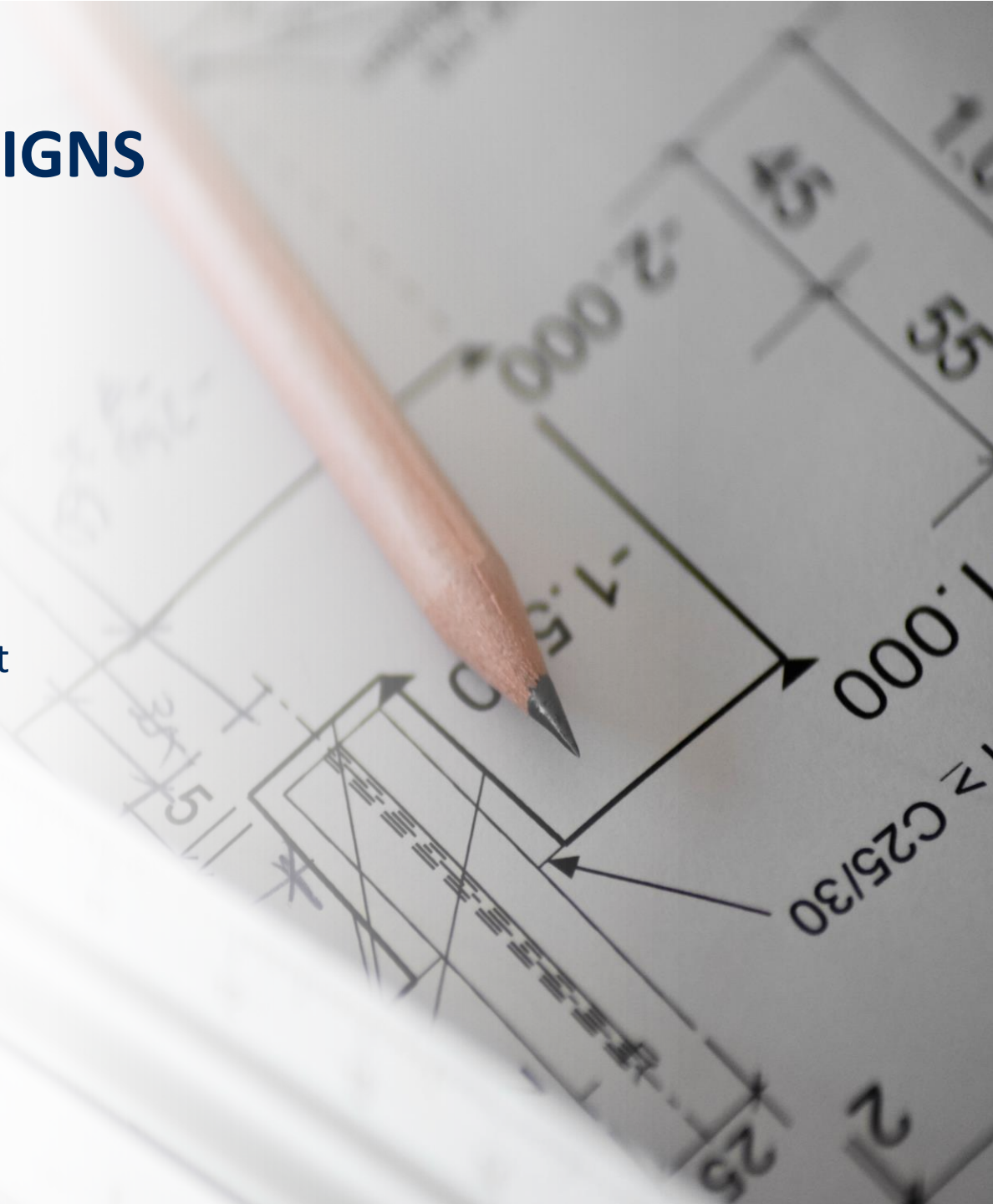
UNDERSTANDING INDUSTRIAL DESIGNS

PATENTS AND INDUSTRIAL DESIGNS

It is important not to confuse how a product looks with how it works.

Industrial designs protect **only the visual features** of a product.

To protect functional features of a product, such as what it is made of and how it works, you need to obtain **patent** protection.



UNDERSTANDING INDUSTRIAL DESIGNS

REGISTERING AN INDUSTRIAL DESIGN IN CANADA: THE CANADIAN INTELLECTUAL PROPERTY OFFICE (CIPO)

To register your industrial design, you must submit an application to the CIPO's Industrial Design Office. Once your design is registered, you get the **exclusive right** to it in Canada for up to **15 years**.

The *Industrial Design Act* is the federal legislation governing industrial designs in Canada.

UNDERSTANDING INDUSTRIAL DESIGNS

WHY REGISTER YOUR INDUSTRIAL DESIGN?

A registered industrial design:

- Constitutes a legal claim of ownership
- Gives you the exclusive right to make, import, sell, offer or expose for sale or rent a finished article to which your design is applied, or a design not differing substantially from it (for up to 15 years)
- Prevents competitors from making, importing, selling, offering or exposing for sale or rent, in Canada, a product that copies or does not differ substantially from your design
- Gives you the ability to enforce your design registration
- Constitutes a valuable business asset

UNDERSTANDING TRADEMARKS

WHAT IS A TRADEMARK?

A trademark is a **combination of letters, words, sounds or designs** used or proposed to be used by a person **to distinguish their goods or services from those of others**.

A trademark **protects** your brand identity, which represents your company and your goods or your services.

UNDERSTANDING TRADEMARKS

TRADEMARK, COMPANY NAME, AND DOMAIN NAME

Trademarks, company names and domain names are often confused:

Trademark

Your company name, your logo or the way you identify or refer to your goods or services

Company name

The name under which you conduct your business, your business name or your trade name

Domain name

The name of your website address on the internet

Registering your domain name or incorporating your business does not automatically give you any trademark rights.

UNDERSTANDING TRADEMARKS

TYPES OF TRADEMARKS

There are 2 types of trademarks:

An **ordinary mark** may include words, designs, tastes, textures, moving images, modes of packaging, holograms, sounds, scents, 3-dimensional shapes, or colours. A trademark may consist of **one or any combination** of these to distinguish goods or services.

A **certification mark** can be licensed to many people or companies for the purpose of identifying that certain goods or services meet a defined standard.

UNDERSTANDING TRADEMARKS

REGISTERING A TRADEMARK

Registering a trademark means it is entered in the **Canadian Register of Trademarks.**

Registering a trademark gives you the **sole right** to use it across Canada for **10 years.** Trademarks are **renewable every 10 years**.

Start the registration process by submitting a trademark application with the Canadian Intellectual Property Office (CIPO).

UNDERSTANDING TRADEMARKS

WHY REGISTER TRADEMARKS?

A registered trademark:

- Constitutes direct evidence that you own the trademark
- Prevents others from registering and using a confusingly similar trademark
- Gives you the ability to enforce your trademark right
- Becomes more valuable if you license your trademark for others to use

UNDERSTANDING TRADEMARKS

CHOOSING A TRADEMARK

The strongest and most potentially valuable trademarks are usually the **least descriptive, but most distinctive**.

Consider using:

- **a coined term or made-up word**
- **a trademark that is unrelated to the goods or services offered**

Consider the translation of your mark if you are thinking of exporting your brand. Translating a trademark into other languages could result in different meanings or interpretations.

UNDERSTANDING TRADEMARKS

USING YOUR TRADEMARK

As the owner of a registered trademark in Canada, you have the responsibility to use the trademark in regard to the goods or services that are identified in the trademark registration.

If you do not use it, your trademark may be expunged from the Register of Trademarks.

UNDERSTANDING TRADE SECRETS

TRADE SECRET

A trade secret is information having commercial value that has been **kept away from the public** and is held among a reasonably limited number of recipients, all of which are under an obligation of confidentiality to the trade secret owner. There is **no registration system** for trade secrets.

Generally, trade secrets are used to:

- Ensure that an invention or a design is not disclosed to the public before applying for a patent or an industrial design
- Protect an invention through means other than patent protection (caveat: the same invention may be conceived and then patented by someone else; trade secret rights do not protect you from patent infringement)
- Protect valuable business information that is not formally protected through other IP rights

CHECK FOR UNDERSTANDING

TRUE OR FALSE: You can lose protection of your trademark, registered or not, if not used.

A. True
B. False

CHECK FOR UNDERSTANDING

TRUE OR FALSE: You can lose protection of your trademark, registered or not, if not used.

A. True
B. False

Answer: True. An owner may have to prove their use of a trademark, and if not used over a certain of time those rights can be expunged (removed).

UNDERSTANDING TRADE SECRETS

WHAT IS A TRADE SECRET

A trade secret can be any business information that gets its value from its **secrecy**, which includes:

- **Methods, techniques and processes**
- **Formulas**
- **Recipes**
- **Customer and supplier lists**
- **Undisclosed algorithm in a SaaS solution**

A trade secret is maintained to protect valuable business information that a company does not want the general public to know.

UNDERSTANDING TRADE SECRETS

SECURING A TRADE SECRET

There is no formal application or registration process for trade secrets in Canada.

Protect your trade secret by ensuring that steps are actively taken to maintain the IP as a trade secret such as:

- **Non-disclosure or confidentiality agreements**
- **Encryption and password protection**
- **Lock and key**

Trade secrets can last a lifetime as long as the secret is maintained. Think of Coca Cola's secret recipe for its popular drink. The secret has been kept for over 100 years.

UNDERSTANDING TRADE SECRETS

PROS AND CONS OF TRADE SECRETS

- There are no registration costs attached to a trade secret
- It can be protected immediately, for as long as the secret is maintained unless discovered independently (and patented) by someone else
- Unlike with a patent or industrial design, you will never have to publicly disclose the details of your trade secret

However, it may not be the best choice of intellectual property (IP) protection if:

- Your competitors can easily reconstruct your creation
- The effectiveness and the cost of keeping the information secured and confidential outweigh the potential financial benefit, keeping in mind other available types of IP protection mechanisms
- Trade secret theft maybe more difficult to prove than patent infringement

CHECK FOR UNDERSTANDING

Which one step below is NOT part of maintaining trade secret protection?

A. Protect your trade secret using non-disclosure and confidentiality agreements.
B. Register the Trade Secret with CIPO.
C. Ensure any physical embodiments of the secret (e.g., notes, hard drives, samples, phototypes, etc.) are kept physically secured.
D. Encrypt and password protect digital files that disclose the trade secret.

CHECK FOR UNDERSTANDING

Which one step below is NOT part of maintaining trade secret protection?

A. Protect your trade secret using non-disclosure and confidentiality agreements.
B. Register the Trade Secret with CIPO.
C. Ensure any physical embodiments of the secret (e.g., notes, hard drives, samples, phototypes, etc.) are kept physically secured.
D. Encrypt and password protect digital files that disclose the trade secret.

Answer: B. There is no formal application or registration process for trade secrets in Canada.

UNDERSTANDING OPEN SOURCE

OPEN SOURCE DEFINED

In some cases, students may want to use open source in the IP that they create at the university.

What is Open Source?

The term "open source" really refers to the openness of source code for inspection, but colloquially now is commonly understood to equate to free use of a particular licensed IP.

It ALLOWS AUTHORS TO GRANT RIGHTS TO THIRD PARTIES TO USE, MODIFY AND SHARE COMPUTER SOFTWARE CODE so anyone who wants to contribute can do so by making a submission or by suggesting changes.

Note: a particular IP does not need to be "free" to be "open source". Indeed, some "open source" software is free for particular uses (e.g., personal use) but might have a license fee for other uses (such as commercial use).

UNDERSTANDING OPEN SOURCE

USING OPEN SOURCE

Can I use open source software that I created at the University?

The answer varies depending on HOW it was created.

- If you created it on your own, and no third party has rights to the software (for example, sponsor, or your employer if you are on paid work placement), it is likely that you can use open source without raising many issues.

Caveats:

- You must ensure no other third party has pre-existing rights to the software before you decide to open source.
- You must ensure you do not use open source software that you do not own on your own (your co-contributors, for example, may not wish to open source) or that contains confidential information of a third party.

WHY IP RIGHTS MATTER

The takeaways from this module for students and faculty are:

- Students and researchers need to be aware of what kinds of intellectual property they are creating.
- Intellectual property can and should be protected to ensure that the inventor holds the rights to the IP they create.
- Inventors can benefit from protecting their IP and should be aware of the most appropriate options to do so. As outlined in this module, inventors might consider using patents, copyright, industrial design or trade secrets to protect the value of their IP.

END OF PRESENTATION

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