

## Intellectual Property Guidelines for Graduate Students at the University of Manitoba



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## Preface

Research by graduate students and university researchers has expanded tremendously over the past thirty years. This growth in research, as well as the structural and economic transfer of knowledge through research, has brought a new appreciation of the value of intellectual property. Confidentiality, publication, and ownership of intellectual property have been identified as important and fundamental issues that need to be addressed. The purpose of these guidelines is to provide some guidance and clarification on the common issues that are encountered related to intellectual property.

As a graduate or postdoctoral researcher, you are an active scholar: you express ideas in a valuable and original manner, conduct research that leads to novel and important findings, or invent new and different ways of building things. All of these endeavors have an intellectual property component that belongs to you, partly or wholly, and may be protected.

Therefore, you must be knowledgeable about intellectual property issues in order to protect your own rights and respect the rights of others. Roles and relationships need to be clear when any collaboration is initiated, whether it is with a thesis



supervisor, a granting agency, a company providing research support, or others with an interest in research.

For instance, the conditions and circumstances in which this research is undertaken can vary widely. Research can be funded in a variety of ways from a variety of different sources. Your role as a researcher can depend on your working relationship with your supervisor and his or her research. All of

these variables can influence the degree to which your stake in intellectual property can be protected.

The aim of this document is to make you aware of the rules and regulations that surround intellectual property rights. It will become clear to you upon reading it that often these regulations depend on your personal circumstances: the conventions of your field, the way your research is being funded and the practices of your supervisor, among others.

It is beyond the scope of this document to enumerate all possible contingencies and their consequences. If it contains one message, it is that you have the responsibility to inform yourself in advance of how these circumstances will affect your intellectual property rights. This entails finding out about and/or negotiating protocol on three levels:

- The University;
- Your supervisor; and
- Your funding source (grants and others).

All three of these can play a role in determining the extent of your intellectual property rights. As a graduate student, it is important for you to be clear at the outset of your studies about how the varied working arrangements out of which your research arises will affect the status of that research as intellectual property.

These guidelines have been prepared by the Faculty of Graduate Studies, the Office of the Vice-President (Research), the Technology Transfer Office (TTO), the Office of Research Services (ORS), and the Graduate Students Association at the University of Manitoba. These guidelines are not policy and are not intended to replace independent legal advice.

## 1. What is Intellectual Property?

In legal terms, ‘data’ *per se* are not intellectual property. They are neither an invention that can be patented nor an expression of an idea that would be considered a copyright work.

Intellectual Property (“IP”) is any form of knowledge, expression, or artistic and scientific endeavor created with one’s intellect such as inventions; computer software; written documents, literary, dramatic, musical and artistic works; trademarks; and industrial designs.

An owner of IP can control and receive payment for its use. Therefore IP can be bought, licensed, sold, leased or shared.

There are various forms of legal protection for IP. The two main types of statutory protection that are most relevant to the University environment are patents and copyright.

**Patents** protect inventions. Inventions are new developments and discoveries that have utility and are novel and non-obvious. Inventions include useful and new machines, articles of manufacture, chemical compounds, software algorithms or improvement of these inventions that are not obvious to a person skilled in the field of the invention.

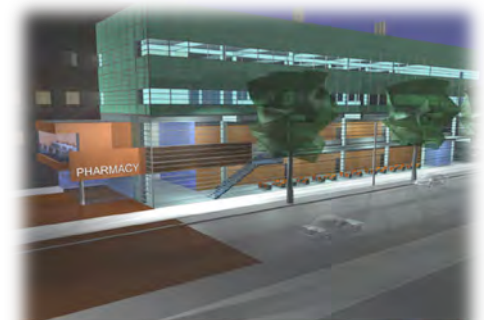
For an invention to be considered ‘new’, it cannot have been disclosed in conversation or publicly prior to the filing of a patent application, such as in a presentation or a publication unless it was covered by a Confidentiality Agreement. In these cases the patentability of the invention may be seriously

compromised and may not qualify for patent protection. A patent grants to the patent owner the exclusive right to make, use or sell the invention for a limited period of time. In Canada, patent protection is in effect for twenty years from the date of issuance, after which the patent expires and anyone is able to use the invention without the patent owner's permission.

**Copyright** protects the expression of ideas, rather than the ideas themselves. It prohibits anyone from copying, publishing, translating, broadcasting, adapting or performing a work without the copyright holder's permission. Copyright protects original written documents, literary, musical, dramatic, or artistic works in a variety of forms. Each of these general categories covers a wide range of creations such as manuscripts, conference papers, presentations, books, computer programs, films, musical compositions, paintings, and photographs. The Copyright law defines parameters for the rights of the creators and the use of the creations by others. For the creators, the law is intended to ensure that they have control over the use of their creations. For those who intend to use the creation, the law specifies the conditions and terms under which the creation may be legally copied, in whole or in part, or used for instruction, research, translation, broadcast, performance, adaptation, or display.

Copyright takes effect automatically when the work is created. For example, upon completion of the student's thesis, the thesis is considered to be copyright protected and the student becomes the copyright holder. The copyright symbol does not need to appear on the thesis, however students should include the copyright symbol © beside their name and year of publication on the cover page of their thesis. The creator may also register their creation with the Copyright Office.

In Canada, the standard term of copyright protection is for the life of the author plus fifty years after their death. According to the *Copyright Act*, the author of a work or creation is the first owner of the copyright. This is, however, contingent upon other factors, such as the sponsored research agreements, employment and University Governing Documents addressing IP, which will be further addressed in these guidelines.



## Moral Rights

The creator of an original work also has moral rights, even if the copyright has been assigned or sold to someone else, “moral rights” are retained. This means that no one, including the person who owns the copyright, is allowed to distort, mutilate or otherwise modify the work in a way that is prejudicial to the honour or reputation of the creator. The creator’s name must also be associated with the work as its creator, if reasonable in the circumstances. In addition, the work may not be used in association with a product, service, cause or institution in a way that is prejudicial to the honour or reputation of the creator without permission.

Moral rights cannot be sold or transferred, but they can be waived. Moral rights exist for the same length of time as copyright, that is, usually for the lifetime of the creator plus fifty years more, and passed to the heirs of the creator, even if they do not inherit ownership of the copyright itself.

There are three other forms of legal protection for IP: trademarks, industrial designs and integrated circuit topography. Trademark is a mark that someone uses to distinguish their products or services from those of their competitors. It is important to note that a trademark must be distinctive and in use for it to be effective. Coca-Cola® is an example of a trademark for a soft drink. A trademark is

sometimes used in connection with a patent, copyright or know-how. Industrial designs refer to features of shape, configuration, pattern or ornamentations and any combination of those features within a finished article. The unique shapes of early Coke bottles and the original Volkswagen Beetle are examples of industrial designs. Integrated circuit topographies are the three dimensional configurations of electronic circuits embodied in integrated circuit products or layout designs. Semi-conductor integrated circuits are at the height of modern information, communications, entertainment, manufacturing, medical and space technologies, and are now finding their way into items as ordinary as household appliances. The act or regulations referred to the microchips which embody such integrated circuits as integrated circuit products. Today’s integrated circuit products are constructed from a complex series of layers of semi-conductors, metals, dielectrics (insulators) and other materials on a substrate. Examples are found in such items as: automobiles, cameras, spacecraft and computers.

For more information on patents, copyright, trademarks, industrial designs, and integrated circuit topographics visit the Canadian Intellectual Property Office website at <http://strategis.ic.gc.ca/cipo>.

## 2. What are the Intellectual Property Rights of the Student?

Unless a student has signed an agreement stating otherwise, they will be the owner of all IP he/she creates, including:

- Material and ideas submitted in course work or presented in seminars
- Thesis
- Lectures
- Inventions
- Printed works written by the student, such as books and articles
- Artistic works such as paintings, sculptures and musical compositions
- Computer programs
- Recorded works such as videos and films

In some instances, the student may not be the sole owner of IP. This will depend upon whether the student signed an agreement with another party, as well as conventions, customs and legislation. In these cases, rights and ownership of IP may have to be shared with others, such as the student's supervisor or various research staff. For example, a particular discipline may hold the custom that all those individuals who were

involved in a work comprise the co-authors for the paper or presentation.

The student's role in the creation of IP is often dependent on the field of study of the supervisor. In the humanities and social sciences, it is normally expected that students will receive guidance from their supervisors, but generate their own ideas, do their own research, and seek out their own financial support. The supervisor serves as a mentor or consultant.

In the physical and life sciences, the normal practice is that the student joins an established research group and works collaboratively with the supervisor or others. In this case, the



supervisor has provided the general ideas and has obtained the funding and resources to support or conduct the research.

In all events, the rights and ownership of IP created by students may be impacted upon by the following:

- a) employment status with the University;
- b) sponsored or funded research agreements; and
- c) the nature of the student's relationship with the student's supervisor.

**Because students, as part of their graduate development, are normally expected to play an active role in developing IP, they should be cautious about signing any such agreement as that indicated at the beginning of this section. It is important that the student consult with his/her supervisor, the Faculty of Graduate Studies, or the Technology Transfer Office prior to signing an agreement, which may impact upon the ownership or rights to use the student's IP. Moreover, please note that students are responsible for agreements which they sign.**

### 3. Who Owns the IP if the Student is an Employee?

Students may work as research assistants, research associates or in another capacity as an employee of the University. Applicable legislation and common law establish principles of ownership of various types of IP created by an employee in the course of their employment. However, the ownership of IP as determined by applicable legislation and the common law can be overridden by an agreement or policy which specifically provides otherwise, such as the University's Governing Documents which modify the application of these generally applicable principles. It is important for the student to clarify their status prior to accepting employment for any work that could lead to the creation of IP.



## Intellectual Property Governing Documents at the University of Manitoba

Intellectual property at the University is administered by the Governing Document entitled “Patents and Copyright”, which apply to IP created by staff members of the University and which may collectively be summarized as follows:

- i. Patents
  - It is encouraged that inventions by a staff member of the University in the course of research shall be disclosed to the University.
  - The University and the staff member shall have equal ownership in the invention.
- ii. Copyright
  - Subject to a special arrangement to the contrary, the University has no interest in any literary work of any staff member; however, the University does have an interest in every recording.

For further information, please consult the University’s Governing Document on Patents and Copyright.

## 4. Who Owns the IP if the Student is Funded for the Research?

Often students are awarded funding in the form of a scholarship, internship or a fellowship or receive financial support, which may carry conditions that impact upon the ownership of IP and the rights pertaining thereto. The relationship between funding and IP rights depends upon the funding body and the terms and conditions of the funding.

For instance, some public funding bodies such as the federal granting councils – Natural Sciences and Engineering Research Council of Canada (NSERC), Canadian Institutes of Health Research (CIHR), or Social Sciences and Humanities Research Council of Canada (SSHRC) do not attach any IP claims to the research they fund. Other sponsors, for instance, the MITACS Accelerate Program, may impose contractual limitations on IP, such as ownership rights, licensing rights or a share of the royalties and may apply restrictions on publications of the research results. If the student is asked to

sign a contract by a sponsor or funding body, it is important for the student to be aware of the terms and conditions of the funding.

**It is important that the student consult with their supervisor and the Faculty of Graduate Studies prior to signing an agreement, which may impact upon the ownership or rights to use the student's IP. Moreover, please note that students are responsible for agreements which they sign.**

Students may receive funding support or have access to research facilities, either on or off campus, as a result of agreements between organizations and the University, such as the Institute for Biodiagnostics, Cereal Research Centre, CancerCare, the Manitoba Institute of Cell Biology, and TRILabs.

**Such arrangements may require that participating graduate students sign an agreement with respect to IP. It is important that the student consult with their supervisor and the Faculty of Graduate Studies prior to signing an agreement.**

Please note that IP rights may be altered by agreement and the student should consult prior to signing such agreements.

## 5. What are the Rights of the Student to the Intellectual Property Created by the Student and the Supervisor?

IP rights are governed by the *Patent Act* and *Copyright Act*, University Governing Documents, the custom of the discipline, and written agreements between the student and their supervisor. For example, if it is an invention, the determination of who is an 'inventor' (or 'co-inventor') is governed by the *Patent Act* and depends on if a person's contribution is original or substantive. The question of whether or not a student has made a substantive contribution is determined by whether the student merely took direction from the student's supervisor and did as the student was told to do, in which case, the student has not made a substantial contribution; or whether a student has provided innovation and intellectual input, which may constitute substantial input. The following, when combined, are examples of substantial contributions:

- conception of idea and design of experiment;
- actual execution of experiment or hands-on lab work;
- analysis and interpretation of data; and/or

if a publication is involved, copyright law and the custom of that discipline will determine who is an author and how authorship is shared and portrayed. Moreover if the research is being funded, the terms and conditions of the agreement with the funding agency or the student's supervisor will most likely specify who has the rights to own or to license the research findings.

Ordinarily, a student will have no claim to their supervisor's work unless the student is a joint author or joint inventor. If the work was done by the student as part of an ongoing research project, it should be expected that the results can be

used, with appropriate attribution, in furthering the research activities of the supervisor and others working in the same laboratory or research group, such as in publications, presentations, and grant applications. It is expected that the student can also use the IP, particularly within the student's own thesis. Should there be an agreement in place, this should be explicitly stated in the agreement. Specifically, students must ensure that nothing shall interfere with the filling of requirements of the student's degree program including, but not limited to, that nothing shall interfere with the publication of the student's thesis.

## 6. When is Someone a 'Joint Inventor' or a 'Joint Author'?

An 'inventor' is someone who has made an original and substantive contribution to an invention. If there are two or more people who have made an original and substantive contribution to an invention, they will be "joint inventors". There is a difference between "inventor" and "patent owner". Even if the employer owns the invention, the inventor will still be named on the patent. University employees are subject to the University's Governing Document entitled "Patents and



Copyright”, not general common law and therefore maintain a fifty percent interest in inventions.

Authorship includes any person who has made a contribution to a work being reported in a presentation, publication and/or artistic performance either in the conception, design, or execution of the experimental work, interpretation of data or drafting of an article/presentation.

The *Copyright Act* does not allow for variance of criteria among disciplines. Copyright law defines a ‘joint author’ as someone who has collaborated on a work in which the contributions of the various authors are not distinct from one another. Only contributors to the form or expression of the work qualify; those supplying ideas normally do not. If each person’s contribution is distinct, the work is a “collective work” and each author holds copyright for their individual contribution.

In the physical and life sciences, collaboration and teamwork are common. Contributors to the original ideas in a project are typically given the right of joint authorship or publications that report on the results of the research. Co-authorship is recognized only where the individuals have participated in a significant way. The following, when combined, are examples of significant contributions:

- Conception of idea and design of experiment;
- Actual execution of experiment or hands-on lab work;
- Analysis and interpretation of data; and/or
- Actual writing of the manuscript.

Rights to senior or first authorship can be difficult to resolve. In the humanities and social sciences the student will probably be the only author of the published work that reports on their research. In the physical and life sciences, students are frequently given first authorship in publications arising from their thesis research. However, some professors may claim the right of first authorship for themselves. The student should inquire as to the professor’s practices prior to selecting them as their supervisor.

Normally, the supervisor, in consultation with his or her co-authors, will make the decision as to when/whether a co-authored manuscript should be submitted for publication and to what journal. A student considering publication of their paper also has the responsibility to consider the intellectual property and co-authorship rights of others who may have been involved in the research.

## **7. Can a Student Use Copyrighted Material?**

Professors and students use copyrighted material in their research and in many of the papers they produce for publication or for presentations. The “fair dealing” exemption in the copyright law allows a researcher to make copies of an article or portion of a book for private study, criticism, satire or research. If a person is reproducing materials for teaching purposes, copyright law and the regulations of the University must be followed.

Copying excerpts from unpublished or published works for term papers, theses or articles can occur, but permission from the copyright holder must be obtained. The author or the publisher may be the copyright holder. When a ‘substantial part of a work’ is copied, written permission from the copyright holder must be obtained. In some instances, copying even a short excerpt may be sufficient to constitute infringement, for example, copying a single table, chart or poem. The Faculty of Graduate Studies has developed a form that students can use to obtain written permission from copyright holders. In the thesis or publication, the student needs to include a notation below the image or excerpt that permission has been obtained. The original signed approval

must be kept by the student with a copy given to the Faculty of Graduate Studies.

## **8. What Can the Student do to Ensure Their Intellectual Property is Protected?**

Upon the appointment of a graduate student to a staff or faculty member’s research program, the student and the supervisor should discuss the terms of the student’s access to information and resources. They should agree in advance on the criteria to assess the relative contributions of all research team members when determining the ownership of any IP developed in the course of the research. The agreement should be in writing, developed jointly and signed by all interested parties. There should be allowances for amending the agreement should circumstances change during the course of the research. Copies of the agreement should be held in a file by the student’s supervisor and the student.

If the student will be participating in external presentations or publications while they are a student or after graduation, co-authorship needs to be clarified in the agreement. The agreement should indicate if and how authorship is to be assigned and in what order, and in relation to which

contributions of the participants. The agreement should include an allowance for the student to be able to publish in any paper or in their thesis the results of their research activities. However the student requires the consent of the principal investigator or lead researcher of the project prior to releasing or publishing confidential or proprietary information.

The agreement should outline the criteria on which relative contributions to any invention will be assessed. Please note, the University Governing Document “encourages” disclosure, but it is not a policy.

## 9. What Should be Done if a Dispute Arises between the Student and Supervisor?

If a dispute or a concern arises with respect to IP, it is important for the student and their supervisor to attempt to resolve any differences themselves. If agreement cannot be reached that is satisfactory to both, the student has several options to pursue. First they should approach their advisory committee. If a resolution cannot be found, the student should then proceed to the graduate chair in their department. If a resolution cannot be found, then the Associate Dean, Academic for the Faculty of Graduate Studies should be consulted. The Student Advocacy Office and the Technology Transfer Office are available for consultation and assistance regarding IP issues at any time for students.

It is critical that the graduate student and the supervisor take steps to **avoid** miscommunication and misunderstanding. The student needs to be aware of their rights and seek clarification on IP rights prior to: accepting an award for research; signing a research agreement; becoming employed to do research; or writing a publication.

## 10. Definitions

**Copyright:** is the exclusive right of the creator, or subsequent copyright holder, to reproduce a work.

**Creator:** Any person who has written or created a Work.

**Industrial Designs:** the visual features of shape, configuration, pattern or ornament (or any combination of these features), applied to a finished article of manufacture;

**Integrated Circuit Topographies:** are the three-dimensional configurations of electronic circuits embodied in integrated circuit products or layout designs.

**Intellectual Property:** any product or form of expression created with one's intellect that is novel and unique.

**Inventor:** any person who has made an original and substantive contribution to an invention.

**Invention:** any new, useful and non-obvious art, process, machine, manufacture, or composition of matter, or any new and useful improvement in any art, process, machine, manufacture or composition of matter.

**Moral Rights:** rights a creator retains over the integrity of a Work and the right to be retained as its creator even after the sale or transfer of the copyright.

**Patent:** an exclusive right to practice an invention granted by a national government, in exchange for a complete disclosure of an invention. Unlike copyright, a patent can only be obtained by registration. Please note a patent application does not necessarily or always result in a patent.

**Trade-Marks:** are words, symbols, designs (or a combination of these), used to distinguish the goods and services of one person or organization from those of others in the marketplace.

**Works:** **manuscripts, conference papers, presentations,** literary, dramatic, musical and artistic works, protected under the *Copyright Act*.

## 11. Related Policies, Guidelines and Legislation

University of Manitoba Research Services & Programs, [Technology Transfer Office](#) (TTO)

University of Manitoba, Governing Document – “[Patents and Copyright](#)”

Digital Copyright Policy

*Copyright Act*, R.S., 1985, c-42

*Patent Act*, R.S., 1985, c. P-4

## Acknowledgements:

- Canadian Association for Graduate Students ([www.cags.ca](http://www.cags.ca))
- Canadian Intellectual Property Office ([http://strategis.ic.gc.ca/sc\\_mrksv/cipo/welcome/welcom-e.html](http://strategis.ic.gc.ca/sc_mrksv/cipo/welcome/welcom-e.html))
- McGill University. (Feb 2004). [Student Guide to Intellectual Property at McGill University](#).
- University of Toronto. (2004). [Intellectual Property Guidelines for Graduate Students and Supervisors at the University of Toronto](#).
- University of British Columbia. (2004). [Intellectual Property Guide](#).
- University of Saskatchewan. [Intellectual Properties Policy: Intellectual Property Rights of Graduate Students](#).
- University of Alberta. (2004). Intellectual Property Guidelines for Graduate Students and Supervisors at the University of Alberta (accessed on July 13, 2009 - <http://www.gradstudies.ualberta.ca/gradmanual/10.1.html>)

## Resources at the University of Manitoba

- [Office of the Ombudsman](#), 406 University Centre
- [Student Advocacy/Student Resource Services](#), 519 University Centre
- [Equity Services](#), 513 Drake Centre
- [Faculty of Graduate Studies](#), 500 University Centre
- [Office of the Vice President \(Research\)](#), 207 Administration Building
- [Technology Transfer Office \(TTO\)](#), 631 Drake Centre
- [Office of Research Services](#), 540 Machray Hall