Before diving into what a patent is and how it is obtained, we must first understand, at least at a basic level, the different forms of intellectual property—commonly referred to as “IP”. IP is a legal term that refers generally to any intangible property that consists of ideas, inventions, rights in creative works, or branding. The main categories of IP are patents, copyrights, trademarks, and trade secrets.

**Patents** are the strongest form of IP, and they form the backbone of the tech transfer process. Patents cover any process, machine, manufacture, or composition of matter—generally, these cover inventions. Obtaining a patent is a fairly complex and expensive process, and this will be outlined in greater detail below.

**Copyrights** are rights in film, literary works, artistic works, musical compositions, or other creative works. Copyrights may also be obtained covering software programs. These are much easier and less expensive to obtain than patents, but the protection they offer is somewhat limited. Copyrights protect the creative aspects of a work, such as the look and feel or particular arrangement and wording, as opposed to the underlying ideas or facts. Our organization, for instance, retains a copyright in the organization and language of this guide, but others are free to use facts about the patent process to make a different guide of their own.

**Trademarks** are primarily source identifiers. These cover logos, slogans, and other information that identifies the source of goods or services. Essentially, trademark protection exists to allow companies to develop goodwill around their products without fear of others using that goodwill to mislead consumers as to the source of the products. Who wouldn’t think of McDonald’s when you see the golden arches?
What are the requirements for a patent?

To obtain patent protection, an invention must meet four requirements—the invention must consist of patentable subject matter, and must be novel, useful, and non-obvious in light of the prior art. "Prior art" is, generally, any public information, prior patent or patent application that would disclose the invention. Public disclosures which may be used as prior art to disallow an invention include post-er presentations, published grant applications, and of course journal publications.

**Patentable Subject Matter:** Patentable subject matter consists of the categories listed previously—any process, machine, manufacture, or composition of matter. A more useful exercise is to mention several categories of things that are not patentable. For instance, anything naturally occurring cannot be patentable, such as isolated gene or peptide sequences and the like. Likewise, algorithms, formulae and other theoretical ideas are not patentable. Einstein could not patent his theory of relativity.

**Novelty:** The novelty requirement ensures that no invention can be patented which has already been disclosed or invented previously. If the patent examiner finds a reference published the application will be rejected on grounds of novelty. This type of rejection is known as "anticipation."

**Utility:** An invention must be useful to be eligible for patent protection. This requirement is not typically an issue; so long as the invention serves any useful purpose, the utility requirement can be met.

**Non-Obviousness:** The non-obviousness requirement is by far the most difficult to predict. Whether an invention is obvious in light of some piece of prior art is a highly fact-based inquiry that depends greatly on the specific circumstances involved for your invention. If the FRD believes that non-obviousness may be a hurdle in patenting your invention, we will discuss with you in more detail the nuances of this requirement.

An additional requirement, known as enablement, requires that the patent application sufficiently describe the invention such that one skilled in the particular area of expertise could make and use the invention without undue experimentation. This prevents inventors who have not fully conceived or developed their invention from filing for a patent prematurely.

This will serve as a guide to the overall process of obtaining a patent. The simplified process given here will detail how a US patent is procured. If we are seeking international protection for your patent, then we will typically file a form of international application known as a PCT. If you have a question or concern about a specific step of patenting your invention, don't hesitate to contact the FRD.

I. Pre-disclosure considerations

Whenever any faculty member believes that his or her research may lead to a viable invention, the best possible course of action is to notify the FRD about the research as soon as possible. Even if the invention is far from final development, it is immensely helpful to keep the FRD apprised of your progress.

Specifically, if any disclosures are to be made concerning your research, including poster presentations, journal publications, or otherwise, you should absolutely contact the FRD. Knowing about the disclosures before they occur will allow us to work with you to develop a strategy for keeping your invention protected while preserving your ability to present your findings to the academic community. This is one of the most common areas where possible inventions are rendered unpatentable. Because public disclosure can have such huge consequences on our ability to obtain a patent, it is imperative that you contact us before disclosing your invention.

II. Invention Disclosure

The first real step in the process of obtaining patent protection is the filing of a record of invention (ROI) with the FRD. This form can be found online at http://academicdepartments.musc.edu/frd/inventors/inventors. forms. The form requires that you briefly describe how your invention works, its possible purposes, and any companies that may be interested in licensing your invention (more on licensing later). Any data or manuscripts that you may have concerning the invention should also be attached. Once your ROI has been received, you will receive confirmation from our office, and we will begin the next step of the process.
III. Invention Assessment

Once an invention has been received, the FRD will perform a detailed assessment of your invention to determine whether it is feasible to obtain a patent. This assessment consists of two prongs: a patentability assessment, and a commercial viability review.

First, we perform a detailed patentability search to determine whether there are any patents, published patent applications, or other references which may render the invention unpatentable. We compile a list of sources that could cause some issue as to either novelty or non-obviousness, and determine from there whether patenting the invention is a viable option. At this stage, we also review the history of your invention to determine whether any previous disclosures you may have made could prevent us from obtaining a patent. If it is determined that your invention is not patentable, then we will contact you with a detailed explanation as to why we cannot move forward.

If your invention is patentable, then we perform a commercial assessment of your invention. Several experts in industry, academia, and the patent space give comments on the commercial viability of the particular invention. Because obtaining a patent can be such a costly process,

IV. Provisional Filing

After the assessment has been completed, the FRD may elect to file a provisional patent application on your invention. A provisional application is essentially a place-holder, in that is not terribly expensive to file and it grants the filer a one-year time period in which to further develop the invention without worrying about being "scooped" by another filer. After the one-year time limit expires, the office must decide to either convert the application to a non-provisional (or utility) application, or abandon it if the invention is still not ready.

V. Utility Application/Patent Prosecution Process

If the provisional application is converted to a utility application at the conclusion of its one-year lifespan, then the process of patent prosecution will begin in earnest. "Prosecution" of a patent describes the process by which the patent examiner investigates the application and communicates arguments, objections to formalities, and other issues that may inhibit the issuance of a patent.

Formal communications concern-