

Department of Electrical and Computer Engineering

University of Minnesota

EE 4951 - Senior Design Projects

Guidelines for Corporate Sponsorship

The Electrical and Computer Engineering (ECE) department at the University of Minnesota is very interested in working with companies to provide real-world corporate-sponsored senior design experiences for our students. If your company is interested in exploring this opportunity, these guidelines will provide you with some information on the background, expectations, and procedures for such projects.

1. To get started, first contact the EE 4951 Senior Design course coordinator for the coming semester to discuss your proposed project. If you do not know whom this person is, please contact Prof. William Robbins, ECE Associate Head, for this information (robbins@umn.edu, 612-626-6722). Information to discuss with the course coordinator includes:
 - a) Type and scope of project.
 - b) Appropriateness as a senior design project. Keep in mind that your project should be suitable for a team of 5-6 engineers and should allow for development of well defined requirements/specs that can be verified in a demo at the end of the semester. The best projects have multiple paths for solution/implementation and are within the experience of a student trained in our electrical engineering and computer engineering programs (and for multidisciplinary teams, students from other engineering programs). It should not be a research project, but should provide the students with a solid design experience. While the students should not be expected to spend an unreasonable amount of time learning something entirely new if they are to successfully complete the project, the projects are expected to expand their knowledge base, including the acquisition of reasonable additional background material.
 - c) Desirability for an interdisciplinary project team that includes members from several areas. It is possible, and in many cases desirable, to have projects that require the expertise of members from outside ECE. We work with other engineering programs at the UofMN to provide such multidisciplinary design team experiences.

- d) Expectations with respect to student effort. This is a 14-15 week, 4-credit course, so the standard expectation is for about 12-16 hours of commitment per student per week, including working on the project, class time, and preparation of reports, presentations, etc. This translates into an expectation that each student will spend about 8-10 hours per week for 13 weeks working directly on implementing the project. Team size is typically 5-6 students, depending on the project.
 - e) Issues with respect to proprietary information, intellectual property, export controls, and foreign nationals.
 - i) In general, any student in the class must be able to participate in the project and all meetings, tours, etc. connected with the project, irrespective of nationality. All team work-product must be available for public access.
 - ii) Products, materials, and information that are not directly the work of the student teams, but only associated with their work, and information provide by the company to the student teams to further their efforts may be kept confidential to the company as required. The attached Non-disclosure Agreement is to be used in such situations.
 - iii) Consistent with University of Minnesota Policy (see attached Guidelines for Student Inventions Resulting From Course Work), if the University of Minnesota's Office of Technology Commercialization determines that any and all intellectual property (project developments) generated by the project are solely the result of the students' work, all such project developments shall belong exclusively to the Sponsoring Company.
 - f) Possibility of funds to help defray costs for the project. Typically, we request that companies consider covering the cost of materials and supplies needed by the students in implementing their project.
2. Provide a short one to two page description of your proposed senior design projects to the course coordinator. The course coordinator will let you know the date by which your description will be needed. The audience for your project description is the students in the course who will make their choice among the projects available for the semester based on your written description and a short 5-minute presentation you will be giving the first week of class. So, put on your marketing hat and make your project sound exciting!

We suggest that you include a brief background statement in your description to provide some context, as well as a clear discussion of the project goals, known user specifications, etc. At the top of your description, please include:

- i. Project Title
- ii. Your name
- iii. Your contact information

3. A faculty member in the ECE Department will be selected to act as the on-site project mentor to the team of students assigned to the project. He or she will serve as the on-the-ground person monitoring and assisting the students as needed, so that the you or your company's representative(s) does not need to handle the details. If you are already in contact with a faculty member in the ECE Department who you would like to fill this role, please let the course coordinator know and we will contact that faculty member to see if they are available.

4. Involvement from the company side can be as much or as little as desired. For example, the design teams typically meet with their faculty mentor once a week, and the company representative(s) can attend these meetings or not, as they wish or as need dictates. The only critical events at which attendance of the company representative(s) is requested, if possible, are:
 - a) For a brief 5-minute presentation of the project to the class the first week of the semester. The course coordinator will send out an e-mail requesting sign-up for presentation time slots shortly before the start of the semester.
 - b) To attend and help evaluate your team's Mid-Project Design Review Presentation. This will be a 25-30 minute presentation scheduled around the seventh week of the semester.
 - c) To attend and help evaluate your team's Product Launch Presentation. This will be a 30-45 minute presentation scheduled the last week of classes.
 - d) To attend and help evaluate your team's Poster Presentation/Product Demonstration at our Senior Design Show. This is scheduled for the last week of classes.

We look forward to working with you on developing and implementing a corporate sponsored senior design project. Please contact the EE 4951 Senior Design Coordinator if you have further questions.

One-Way Nondisclosure Agreement

Parties.

This Nondisclosure agreement (the "Agreement") is entered into by and between

[insert company name and address] (“disclosing party”) and

[insert name and address of person to whom company will disclose information]
 (“receiving party”) for the purpose of preventing the unauthorized disclosure of Confidential Information (as defined below).

Summary.

Disclosing party may disclose confidential and proprietary trade secret information to receiving party. The parties mutually agree to enter into a confidential relationship with respect to the disclosure of certain proprietary and confidential information (the "Confidential Information").

Definition of Confidential Information (Written or Oral).

For purposes of this Agreement, "Confidential Information" shall include all information or material that has or could have commercial value or other utility in the business in which disclosing party is engaged. In the event that Confidential Information is in written form, the disclosing party shall label or stamp the materials with the word "Confidential" or some similar warning. In the event that Confidential Material is transmitted orally, the disclosing party shall promptly provide a writing indicating that such oral communication constituted Confidential Information.

Exclusions from Confidential Information.

Receiving party's obligations under this Agreement shall not extend to information that is: (a) publicly known at the time of disclosure under this Agreement or subsequently becomes publicly known through no fault of the receiving party; (b) discovered or created by the receiving party prior to the time of disclosure by disclosing party; or (c) otherwise learned by the receiving party through legitimate means other than from the disclosing party or anyone connected with the disclosing party.

Obligations of Receiving Party.

The receiving party shall hold and maintain the Confidential Information of the other party in strictest confidence for the sole and exclusive benefit of the disclosing party. The receiving party shall carefully restrict access to any such Confidential Information to persons bound by this Agreement, only on a need-to-know basis. The receiving party shall not, without prior written approval of the disclosing party, use for the receiving party's own benefit, publish, copy, or otherwise disclose to others, or permit the use by others for their benefit or to the detriment of the disclosing party, any of the Confidential Information. The receiving party shall return to disclosing party any and all records,

notes, and other written, printed, or tangible materials in its possession pertaining to the Confidential Information immediately on the written request of disclosing party.

Time Periods.

The nondisclosure and confidentiality provisions of this Agreement shall survive the termination of any relationship between the disclosing party and the receiving party.

Miscellaneous.

Nothing contained in this Agreement shall be deemed to constitute either party a partner, joint venturer or employee of the other party for any purpose. This Agreement may not be amended except in a writing signed by both parties. If a court finds any provision of this Agreement invalid or unenforceable as applied to any circumstance, the remainder of this Agreement shall be interpreted so as best to effect the intent of the parties. This Agreement shall be governed by and interpreted in accordance with the laws of the State of Minnesota. Any controversy or claim arising out of or relating to this Agreement, or the breach of this Agreement, shall be settled by arbitration in accordance with the rules of the American Arbitration Association and judgment upon the award rendered by the arbitrator(s) may be entered in any court having jurisdiction. The prevailing party shall have the right to collect from the other party its reasonable costs and attorneys fees incurred in enforcing this agreement. Any such arbitration hearing shall include a written transcript of the proceedings and a written explanation for any final determination. This Agreement expresses the complete understanding of the parties with respect to the subject matter and supersedes all prior proposals, agreements, representations and understandings. This Agreement and each party's obligations shall be binding on the representatives, assigns and successors of such party. Each party has signed this Agreement through its authorized representative.

DISCLOSING PARTY:

Signature

Disclosing Party's Name/title
Date: _____

RECEIVING PARTY:

Signature

Receiving Party's Name
Date: _____

GUIDELINES FOR STUDENT INVENTIONS RESULTING FROM COURSE WORK

August 2010

Courses affected include, but are not limited to:

BMEN 4001/4002 Biomedical Engineering Design

EE 4951 Senior Design Project

ME 4054 Design Projects

Background

As defined in Regents Policy *Commercialization of Intellectual Property Rights*, and confirmed by the Office of General Counsel, the rights to all intellectual property created by UMN students while taking courses using substantial University resources belong to the University.

In a typical year, there are about 35 design reports in December (ME and ECE) and 50 design reports in May (ME, ECE, BME).

Procedure

1. Students must file an Intellectual Property Disclosure Form (IPDF) when potential IP has been developed.
 - a. The IPDF can be very brief, and be supplemented with the Design Report.
2. OTC will make a rapid assessment of whether the invention involves UMN faculty and/or staff, existing UMN IP, or an outside entity.
 - a. If UMN faculty and/or staff, existing UMN IP, or an outside individual inventor is involved, OTC will evaluate the IP via the standard process and procedure.
 - b. If there are no inventors other than the student(s), OTC will waive and assign UMN rights to the student(s).
 - i. The student(s) retain the option to enlist OTC commercialization support, moving the case forward under current Regents Policy and OTC procedures if desired.
 - c. If a company or outside entity prospectively sponsors a course project, and the sponsorship agreement stipulates IP ownership to the company or outside entity, and OTC confirms there are no inventors other than students, OTC will waive and assign UMN rights to the student(s) for their subsequent disposition with the sponsor consistent with the terms of the sponsorship agreement.
3. The design group adviser should not be involved in IP development, but if he/she should be for some unusual circumstance, any such adviser who is a company employee must consult his/her company about IP rights.