Guidelines for Sponsors of
Capstone Senior Design Projects at VCU College of Engineering (CoEgr)

Background: All VCU Engineering and Computer Science students, in their senior year, are required to work on a team project to address actual, real-world problems and applications as presented by experts from industry, non-profits, healthcare and academia. Capstone courses include project activities on theoretical background, user needs, design and development, regulatory, manufacturing, finance, product development and marketing. Projects include output on the solution design, construction of prototypes and testing. This effort culminates in the Capstone Design Expo, a forum open to sponsors, faculty, students, benefactors of the School of Engineering and the general public. The entire Capstone Design output from the College of Engineering is on display, with a series of awards for multiple project categories.

Project sponsors from industry, healthcare, non-profits and faculty can benefit from participation in the VCU Engineering Capstone Design program in the following ways:

• An opportunity to interact directly with the new generation of graduating engineers.
• A low cost and minimal risk way to evaluate and attract new talent.
• Ability to access fresh, creative perspectives to engineering opportunities or problems.
• A cost-effective approach for “backburner” projects.
• Strengthen relationships with university faculty and expertise.
• Professional development opportunities for employees to serve as project mentors.

Submitting Project Proposals: A project template is provided for sponsors and potential sponsors to use when submitting a project idea. See Attachment 1. All project ideas and proposals should be sent to Dr. Ben Ward, Associate Professor, and Capstone Director. bcward@vcu.edu, or (804) 828-6371.

Timelines: Capstone projects run from August until the following May. Capstone project proposals for the upcoming Academic Year are accepted beginning each January. There is no strict deadline, but project proposals get maximum consideration if submitted before May 15th. Proposals are evaluated by the VCU Engineering Capstone Steering Committee for compliance with teaching objectives for students’ capstone for-credit course. For all Capstone projects, an engineering faculty member must agree to be the academic advisor. Students must accept the proposal as their Capstone projects. This final student matching occurs in the last week of August.

Project Support: To assist in support of the capstone program across the College, a project donation of $5,000 per accepted industrially sponsored project is requested. All donations should be to the College of Engineering Foundation; with "Capstone Design Course" in the memo line. Donations are tax-deductible depending on the sponsor’s situation. Projects sponsored by non-profits do not require the donation.

Funds collected are used to cover general expenses for the Capstone program, including a portion of the director’s salary, all of the costs associated with the year ending Capstone Design Expo at the Siegel Center, and expenses for student visits to out of town sponsors, competitions and conferences for students.
Each capstone project team receives “seed-funds” of $750.00 from the university. Any additional project-specific costs (such as specialized equipment, analytical costs, software and other hardware not available in the College), must be purchased and/or supplied by the sponsor promptly. Most projects sponsored by non-profits are exempt from the donation requirement.

As a capstone sponsor, the College of Engineering requests the following:

- A project proposal be provided that:
  - Describes the problem or unmet need (see template in Attachment 1).
  - Highlights expected deliverables.
- A mentor from the sponsor should be identified and contact information shared by September 1. Mentor should meet with their team at least one hour bi-weekly (in person, phone, Skype, or other). Weekly meetings are preferred. These interactions are significant for students’ education and progression of the team’s efforts.
- The sponsor provides guidance and feedback for developing project concepts and project deliverables.
- The sponsor provide input to the faculty advisor on individual and team performance.
- Be aware that the faculty project advisor is responsible for the management of all student tasks and assignments. Let the advisor know immediately if there are any issues or concerns with the team.
- Sponsor and their invitees should plan to attend the Capstone Expo at the Segal center in late April. Approximately 100 projects and teams are represented at the annual Expo.

**Intellectual Property:** Undergraduate students normally have rights to any intellectual property they generate. To provide IP protection to the sponsor’s project, the VCU College of Engineering has a straight-forward, client-friendly approach for undergraduate students to assign these rights to the sponsor. Sponsors have until September 30th to request students assign any IP generated on their project to the sponsoring company. Also, these sponsors may share confidential information with the students under the auspices of a VCU Non-Disclosure agreement. VCU’s general counsel has reviewed both the IP rights assignment and NDA agreements; the drafts are in Attachment 2 (Assignment) and Attachment 3 (NDA).

**Mentors:**
- The mentor(s) from the sponsoring company should be introduced to the students and faculty advisor by September 1st.
- Mentor(s) should commit to spending at least one hour every two weeks interacting with the team; weekly updates usually provide improved communications and results.

**Acknowledgment:** Sponsors are asked to acknowledge these guiding principles no later than September 1, especially the details of the attached legal agreements and the agreement by the industrial sponsor to provide the $5,000 donation.
Capstone Design Project Proposal

Title of Project: ______________
Date: ______________________

Proposer: Please provide name, organization and contact information

Project Title: Please provide a brief, descriptive title

Unmet Need – Engineering Problem to be Addressed: Briefly describe the unmet need (or problem) and its significance. (One or two sentences)

Proposed Deliverables: Please describe the specific item(s) that would represent successful completion of the project, e.g. working prototype, test and evaluation evidence, demonstration. (One or two sentences or bullets)

Anticipated Resources Required: Apart from students, this represents project-specific requirements, materials, instrumentation or other devices, access to labs, clinical areas, or manufacturing areas. (Bullets)

Anticipated Skills required: e.g. computer modeling, cell culture, additive/subtractive manufacturing, US Citizenship (bullets)

Other Information: Any other factors students should know to make an informed decision to undertake this project
INTELLECTUAL PROPERTY ASSIGNMENT
(VCU Undergraduate Student and Company)

I, _____, am a student enrolled in a design course at Virginia Commonwealth University ("Course"). As part of the Course, I have elected to participate in a particular engineering design project ("Project") sponsored by ________ ("Company"). I recognize and understand that certain existing inventions and technologies that are provided by the Company as the subject of the Project are the property of Company ("Company Technology").

Project (title, designation or description____________________________________________

I agree, in consideration for the use of Company Technology, and/or for other consideration, to assign, and hereby assign, to Company all rights, including patent rights and copyrights, in improvements or inventions that rely on Company Technology of which I conceive or first reduce to practice during the course of my work on Project ("Inventions"). I agree to inform Company of any Inventions that I may develop and to cooperate with Company, at Company’s expense, to obtain intellectual property protection (including copyright(s), patent(s), trademark(s), or any other means of protecting Materials) relating to any Inventions. Company agrees I will have the same rights and protections concerning Inventions that Company provides to its employee inventors under Company policy. Company will manage the intellectual property and will be solely responsible for deciding what form of protection, if any, to pursue and the form and extent of commercialization of the intellectual property if any. I acknowledge that my obligations and responsibilities under this agreement will continue until the conclusion of my involvement with Project.

Company agrees I shall retain a royalty-free, irrevocable license to use for educational purposes all Inventions assigned to Company hereunder. This license includes but is not limited to my participation in a publicly accessible Senior Design Expo, my discussion with and submission to faculty at Virginia Commonwealth University, my work on the Project as part of my academic course of study, and submission of my work on the Project for recognition by Virginia Commonwealth University.

Company

Student

By: Authorized Signature

Student:

Printed Name:

Printed Name:

Title:

Date:

Date

March 7, 2019
This Agreement is effective as of ____ (the "Effective Date"), between ______, a student at Virginia Commonwealth University ("Student") and ____, with a place of business at __________ (“Company”).

Project (title, designation or description): __________________________________________

BACKGROUND

A. Student is enrolled in a design course at Virginia Commonwealth University ("Course"). As part of the Course, Student has elected to participate in a particular engineering design project sponsored by Company ("Project").

B. Company possesses, and considers proprietary and confidential, certain information, drawings, data, software, documentation, business plans and know-how relating to ______, (all such information and materials hereinafter referred to as “Confidential Information”). Company and Student are both interested in having Student receive access to Confidential Information for the sole purpose of having Student work on Project during the Course as part of Student’s academic degree program (“Purpose”).

Company and Student hereby agree as follows:

CONFIDENTIALITY

1. This Agreement does not obligate Company to provide to Student any Confidential Information; and Company may at its sole discretion determine which of its Confidential Information it will provide to Student.

2. All Confidential Information provided in tangible form will be marked as such. If Company provides Confidential Information by verbal communications, it shall provide Student a written notice within thirty (30) days after each such communication that identifies what was considered Confidential Information in the communication.

3. Student will use Confidential Information only to the extent necessary for the Purpose. Except as otherwise specifically provided in this Agreement, Student will not disclose Confidential Information to others unless they are faculty, instructors or students affiliated with the Course, or unless Company has granted prior written permission to disclose the Confidential Information.

4. The confidentiality obligations of Student under this Agreement do not apply to Confidential Information which: (a) at the time of the disclosure is generally available to the public or thereafter becomes generally available to the public through no act or omission of Student; (b) Student can show by written records to have been in Student’s possession prior to the time of the disclosure and was not acquired, directly or indirectly, from Company; or (c) Student can show by written records to have been independently made available as a matter of right to the Student by others, provided such others did not acquire the Confidential Information directly or indirectly from Company; or (d) is required to be disclosed by law or court order.
5. Within thirty (30) days of the completion of the Course, Student will return to Company, or
destroy, all Confidential Information provided to Student by Company.

6. Notwithstanding the other provisions in this Agreement, Student may do the following with his or
her work in Course, which may include Confidential Information ("Course Work"): (1) present Course
Work to project reviewers and instructors affiliated with Course for purposes of evaluation and grading of
Student; (2) present Course Work as part of the publicly accessible Senior Design Expo; (3) discuss
Course Work but not disclose any Confidential Information to any potential employer in job interviews
for purposes of seeking employment; and (4) provide Course Work to the Virginia Commonwealth
University School of Engineering to be retained for educational purposes, provided such work shall be
marked "Confidential. Nothing in this Agreement precludes Student from seeking or obtaining
employment with any third party during the term of this Agreement.

7. This Agreement applies only to Confidential Information received by Student during the term of
Course.

8. Nothing contained in this Agreement shall prevent Student from participating in the Course,
engaging in a meaningful academic exercise as part of his or her course of study, communicating with
fellow students and faculty as necessary to participate in the Course, or displaying Course Work or
receiving recognition for Course Work.

In witness whereof, the parties hereto have made, entered into, and executed this Agreement made
effective as of the date above.

STUDENT
By__________________________
Typed Name____________________
Title__________________________
Date__________________________

FOR COMPANY
By__________________________
Typed Name____________________
Title__________________________
Date__________________________