INTERNERSHIP POLICY FOR
EE 494

ELECTRICAL ENGINEERING PROGRAM

SOUTH DAKOTA STATE UNIVERSITY

May 28, 2013

Electrical Engineering and Computer Science Department
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Electrical Engineering Program
Internship Policy

Introduction

Internship education is the cooperation between industry and the university to provide the student with a supervised technical work experience, which strengthens the student’s engineering experience and credentials. The internship education experience offers many rewards and can be used for undergraduate technical elective credit. The College of Engineering maintains a guide which summarizes the internship program policies for all of its departments and describes the benefits of internship education to both students and industry. This specific document describes the internship policies that are particular to the Electrical Engineering Program, and it supersedes all previous Internship Policies for the department.

Students who wish to participate in an approved Internship Program should work with the employer’s worksite supervisor to develop a written plan for the work. This plan confirms the scope and technical nature of the work experience and thus offers both student and employer some “protection” by guaranteeing more than just incidental work. The typical work challenges the student in areas of importance to electrical engineering. Once approval of the program is granted by the Internship Coordinator, the Coordinator will register the student into the EE 494 Internship course for the specified number of credits. Following completion of the work experience and follow-up reporting, the EE 494 credits are graded and can be used by the student as applied technical elective credits towards the BSEE degree. This document serves as a guide for EE students and companies interested in an approved Internship Position.

Eligible Students

Only students who have successfully completed EE221/221L Circuits II/Lab or EE222/22L Circuits and Machines/Lab are eligible for EE 494 Internship credit. The student must also possess a minimum cumulative GPA of 2.0 to qualify.

Viable Work Experience

To be viable, internship education work experience must be more than incidental employment--it should be recognized as on-the-job training experience that calls upon and challenges the student’s prior academic and practical experience credentials. The work experience must include an obvious element of electrical engineering experience in order to be approved. It is understood that this experience may take various forms, and it is the burden of the student and employer (i.e., worksite supervisor) to clearly identify the electrical engineering component.

Credit will not be awarded for work experience which occurred before a plan was approved by the Internship Coordinator. Thus, prior work experience, military service, etc., will not be approved for EE 494 credit. While such work may unquestionably benefit the student, credit will not be allowed.
The Internship Work Agreement

A formal written Internship Work Agreement, typically no more than one page in length, is required before approval of the work experience for credit is granted. It is the responsibility of the student and the employer’s worksite supervisor to produce the formal plan. It is the responsibility of the student to type the plan and present it to the Internship Coordinator for review and approval (please make an appointment). An approved plan must include the following items:

1. A description of the nature of the position. The description should include reasonable detail of the proposed work and must detail how the student will gain some aspect of electrical engineering experience. While the exact nature of the work may not be known, the work description should be as specific as possible (see the attached example).

2. The proposed start/stop dates for the employment (normally within one academic term).

3. The fraction of full-time employment. If not full time, what fraction?

4. Assuming the employment period is during the summer months (i.e., at least eight weeks between spring and fall semesters) and the work is full time, the number of proposed EE 494 credits guide follows:
   a) If student is requesting internship credit immediately following successful completion of the sophomore EE course requirement, EE 494 is limited to one credit.
   b) If student is requesting internship credit immediately after successful completion of the junior EE courses (electronics, signals and microcontrollers), EE 494 is limited to two credits.
   c) If the employment period coincides with or includes an academic term (either fall or spring), EE 494 is limited to three credits, if the student is not enrolled in other university courses – special exceptions may be granted, but must be approved prior to taking the EE 494 course.
   d) If the employment period coincides with an academic term (either fall or spring), and the student is working at least half time but less than full time, EE 494 is limited to one credit. The part-time student may be enrolled in SDSU courses during this period.

Note: A maximum number of three credits of EE 494 Internship may be applied toward the B.S. degree in Electrical Engineering.

5. Signature lines for the student, employer (worksite supervisor), and the Internship Coordinator.
Documenting the Work Experience

It is widely known that good technical communications skills are essential for technical professionals. Students are required to maintain a laboratory notebook (or computer-based entry) that serves as a method for daily logging of activities. Keeping a journal of the experience will help improve the student’s technical writing skills and also serves as a convenient means for summarizing the work experience for a mandatory final written report. Students are encouraged to have their worksite supervisor periodically review their notebook and write constructive comments that will benefit the student. If the employer has concerns over the propriety of the work disclosed in the student’s notebook, prior arrangements should be made by the student with the employer to avoid disclosure of any confidential company information. Entries should always start with a statement of objective, followed by content that describes progress towards this objective, and should finish with a statement regarding relative success in meeting the objective.

Student Midterm Progress Review Memo

At approximately the midpoint of the work period, students are required to submit a short report to the Internship Coordinator (via D2L Dropbox), which summarizes their work experience to date and comments on whether the experience is meeting the objectives as set forth in the original work plan. The report must be carbon copied to the worksite supervisor – please have supervisor email a short note to the Coordinator indicating that they have received, read and approved the report and its contents. There is no need for the supervisor to evaluate and report on the quality of your work at this time.

Final Employer Evaluation of the Work Experience

At the conclusion of the work period, the worksite supervisor must submit a brief (typically no more than one page) evaluation of the student’s performance for the work and whether the employer is satisfied the objectives originally set forth in the approved work plan have been achieved. Candid comments regarding the student’s performance and potential as an engineer are encouraged and will remain confidential with the EE program unless otherwise expressed by the worksite supervisor. This memo must be sent via email directly to the Coordinator.

Final Student Report on the Work Experience

At the conclusion of the work period, students are required to write a final report (typically double or greater than the number of pages in the midterm report) which describes the nature of their work and how/whether the objectives set forth in the original work plan were met. The format required for the final report is:

- **Cover page:** should include EE 494 Internship course title, number of credits, student name, dates of employment, submission date, employer name and address.

- **Introduction:** describe the intent of the work position, general nature of the work and the scope (content of the report)
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- Description of the Work: describe the work in moderate detail, making it clear that the experience was indeed valid practical electrical engineering experience. Choose one or two particular projects or tasks you were involved with and detail your work in more depth. Clearly indicate the significance of this work to both you and the employer.

- Conclusions: briefly summarize your work experience and conclude whether you did or did not achieve the objective of the work plan. Explain – will you be a better student and professional electrical engineer having completed this work?

- Appendix: attach a copy of the signed Work Agreement and, where applicable/appropriate, attach brochures, diagrams, memos, reports, etc., that illustrate something you contributed during the work experience.

Final EE 494 Grade

The final grade (A, B, C, D, or F) for the EE 494 credits will be determined by the Internship Coordinator after thorough review of the student’s notebook, final report, and the employer’s evaluation, and adherence to the guidelines set forth in the course syllabus.
EXAMPLE WORK AGREEMENT

To: Dr. Steven Hietpas, Internship Coordinator
   Electrical Engineering Program

Date: May 29, 2013

Re: Internship Work Agreement

Ace Incorporated (Anytown, SD) would like to provide an Internship Position to Joe Student for the summer 2011 term. Joe is currently an SDSU Electrical Engineering student who is enrolled in junior E.E. classes and has agreed to accept this position. (or: position to Joe Student for the fall 2011 term. Joe is currently an SDSU Electrical Engineering student who is enrolled in Junior E.E. classes and has agreed to accept this position in place of enrolling for classes during the fall semester) The following information should satisfy the requirements of your Internship Policy:

1. The student will work as an assistant engineer in our Engineering Department under the supervision of Mr. James Green. In this position Joe will be required to use/learn various laboratory equipment, such as {list} and computer software such as {list}. His work will support staff engineers in the product development and testing area and will require both hands-on testing and computer design/simulation of product performance. He will gain experience in developing and verifying product specifications and he will gain design experience in working closely with our staff engineers who design all new product testing procedures. He will also gain software design experience in setting up a database to archive prior test data for the company and will participate in weekly project review meetings.


3. Full-time employment (40 hr./wk.)

4. Number of EE 494 Internship credits: 2

5. Approved by:

___________________________
Joe Student (student ID)        James Green, Engineer (Worksite Supervisor)

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Dr. Steven Hietpas, Internship Coordinator