INTERNSHIP POLICY FOR
EE 494

ELECTRICAL ENGINEERING PROGRAM

SOUTH DAKOTA STATE UNIVERSITY

Approved: March 1, 2023

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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, consistent with University Policy 2:24, which summarizes the internship program policies for all of its departments and describes the benefits of internship education to both students and industry. This document describes the internship policies specific to the Electrical Engineering Program, and while it is subject to the provisions of University Policy 2:24, it supersedes all previous internship policies for the program.

Student participation in an internship for academic credit in the program must be approved by the Department (Internship Coordinator) and the student must be enrolled in the correlated course for academic credit during the internship experience. The EE494 Instructor will provide a syllabus for the course, interact with the student and the internship site, and grade the student's completion of the internship. Students who wish to participate in an approved internship program will work with the employer's worksite supervisor to develop a written plan for the work (see example on last page) for approval by the Coordinator and Instructor. This plan confirms the academic outcomes of the internship and identifies 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 internship work should challenge the student in areas of importance to electrical engineering.

Once approval of the program is granted by the Coordinator and Instructor (which must occur at least one week before the summer session begins), the Instructor will provide necessary registration override enabling the student to enroll into the EE 494 Internship course for the specified number of credits (student is required to pay for the course on or before the university deadline). 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 EE222/222L *Energy Conversion/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(s).

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.

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An Employer's Obligations

The employer may require student interns to agree to employer's standard employee confidentiality and/or intellectual property agreements before starting work. The employer agrees not to require students to sign any non-compete agreement.

The Employer is responsible for the acts and omissions of its employees and agents and must maintain adequate insurance (which may include a bona fide self-insurance program) to cover any liability arising from the acts and omissions of the Employer's employees and agents.

Student educational records are protected by the federal Family Educational Rights and Privacy Act (**FERPA**), 20 U.S.C. § 1232g. Employer will comply with FERPA and will not access or make any disclosures of student educational records to third parties without prior notice to or consent from SDSU, or as otherwise provided by state or federal law.

The Internship Agreement

A formal written Internship Agreement is required before the work experience may be included in a course for Internship credit. It is the responsibility of the Internship Coordinator to coordinate the Internship Agreement and the work plan thereunder and to engage review of the plan with the Instructor prior to giving final approval. It is the responsibility of the student and the employer's worksite supervisor to produce the proposed work plan for the Internship Coordinator to include in the course under the syllabus setting forth the educational outcomes. It is the responsibility of the student to type the plan and present it to the Internship Coordinator for review and approval (an appointment via email exchange is required by the student) at least two weeks prior to the end of the spring semester.

An approved work plan must include the following items:

1. A description that details the scope of the proposed work. The description should include reasonable details of the proposed work and must detail how the student will gain some aspect of electrical engineering experience.

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), Instructor, and the Internship Coordinator.

Once the proposal is received and approved by the Internship Coordinator:

A. The EE 494 Course Instructor will
   1) provide necessary registration override enabling the student to enroll into the EE 494 Internship course for the specified number of credits, and
   2) Develop a course syllabus that includes the following:

      a. A course description that details the scope of the proposed work and how it applies skills and knowledge developed in the classroom in a workplace setting.

      b. Course learning outcomes that describe what the student is expected to learn through the internship.

      c. Performance standards applicable to the internship, as well as a grading policy to measure performance.

      d. A schedule of any academic readings and assignments applicable to the internship.

      e. A proposed schedule for reviewing the student's progress, along with standards for documenting such progress.

      f. A statement that the internship complies with the applicable requirements of the Fair Labor Standards Act.

B. The student will
   1) Make payment for the course before the EE 494 course session begins, and
   2) Log on to the D2L EE 494 course page when it goes live (first day of session), and
      a. read the course syllabus
      b. send an email to Instructor acknowledging that they have read the syllabus and understand the course requirements.

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. The entries are to be technical in nature, including design objectives, diagrams, schematics, calculations, test data, etc. Keeping a journal of the experience will help improve the student's technical writing skills and serves as a convenient means for summarizing the work experience for a mandatory midterm and final written reports.

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 Report

At approximately the midpoint of the work period, students are required to submit a short report to the Instructor (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 audience for this report is the worksite supervisor. The Instructor will assess the quality of the technical report.

Additionally, the report must be sent to the worksite supervisor via email. Please have supervisor reply to this email with a short note to the Instructor indicating that they have received, read and approved the report and its contents (the supervisor should include a carbon copy of this email to the student). 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 Instructor.

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 primary audience of this report is the worksite supervisor. 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)
- 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 Grade for EE 494

The final grade (A, B, C, D, or F) for the EE 494 credits will be determined by the Instructor 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.

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Example Internship Agreement Work Plan

To: (Internship Coordinator Name), Internship Coordinator
Electrical Engineering Program

Date: March 30, 2023

Re: Internship Agreement Work Plan

Ace Incorporated (Anytown, SD) would like to provide an internship position to _____ with start date of _____ and end date of _____. (Student) is currently an SDSU Electrical Engineering student who is enrolled in junior E.E. classes and has agreed to accept this position. The following information should satisfy the requirements of your Internship Policy:

1. (Student) will work as an assistant engineer in our Engineering Department under the supervision of (worksite supervisor name, title, and email address). In this position, (Student) will be required to use/learn various laboratory equipment, such as {*list*} and computer software such as {*list*}.

(Student) 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.

(Student) 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.

2. Full-time employment (40 hr/wk). OR (Student's name) will be an unpaid intern and (his/her) activities during the internship do not constitute employment under the FLSA.

3. The schedule for midterm review of (student's name) progress will be occur approximately half way into the summer term, and a final review will occur within one week of the term end date.

4. Approved by:

_____	_____
Student Name and ID, Student	Date
_____	_____
Worksite Supervisor Name, Worksite Supervisor	Date
_____	_____
Instructor Name, Instructor	Date
_____	_____
Internship Coordinator Name, Internship Coordinator	Date