CSE498R/EEE498R/ETE 498R
Internship Guidelines
Department of Electrical and Computer Engineering
School of Engineering and Physical Sciences (SEPS)
North South University, Bashundhara, Dhaka-1229, Bangladesh

Course Summary:

This course is designed to provide experience to engineering students through internship/Co-op works in the public and private industry related to Electrical, Electronics, Telecommunication, and Computing Technology. Students will work in the industry, prepare detailed report and present in front of a departmental committee.

Course Objectives:

The objective of this course are to:

1. Gain practical experience within the industrial engineering environment.
2. Apply knowledge and skills learned in the classroom in a professional setting.
3. Develop a greater understanding about career options while more clearly defining personal career goals.
4. Learn, develop and refine time-management skills, interpersonal skills, organizational/teamwork skills, and oral/written communication skills.
5. Identify areas for future knowledge and skill developments.
6. Get exposure to a professional network for future transition from academia to industry.

Prerequisite for Enrollment in 498R:

1. Successfully complete at least 110 credit hours of course works and complete course assessments.
2. Not register for other courses in the internship semester. *
3. Secure the internship in the semester before the internship semester.

* Exception can be considered for special cases, provided the student obtains No Objection Certificate (NOC) from the company and ECE department.

What Constitutes a Professional Engineering Internship?:

Certain types of work experiences are **not eligible** for internship (498R) course credit, as noted below:

1. Self-employment.
2. Work performed in a student's family-owned or family-managed business.
3. Work performed for a student-run organization.
4. Non-Engineering Internship roles.
    ○ The internship should be related to the student's major of study.
    ○ The engineering aspect of the selected internship must be clearly defined.
5. Remote employment.
    ○ Telecommuting jobs.*
    ○ Performing door-to-door sales.
    ○ Works away from the industry reporting manager and/or outside a professional business settings most of the time (More than 20% of the internship duration).
        ■ Exception: On-site client meetings / engineering works.
            ■ Example 1: Presenting a software module or having a meeting with external stakeholders in presence of a reporting manager.
            ■ Example 2: Repairing / building / deploying modules onsite.
6. Participation in a political campaign, political action committee (PAC) or lobbying effort.
    ○ Interning for a seated public servant is acceptable, as long as it is an engineering internship.
7. Training activities
    ○ Time spent in engineering/IT training and/or certification courses.
    ○ Time spent for preparing for certification exams like CCNA/CCNP, OCJP etc.

*Telecommuting jobs can be approved based on Faculty advisor recommendations.

Role of Faculty Supervisor in 498R

Student will complete the internship under an assigned faculty member (internship supervisor). The internship supervisor will be assessing the assigned student's effort, performance and success, based on periodic deliverables, meeting with the student and a final internship report. To enrich the student's internship experience, the internship supervisor will be helping the student in ways such as:

1. Assisting students in acquiring / sharpening skills that are required in work.
2. Providing guidance on work-life balance.
3. Encouraging students to exercise professionalism in all kind of conduct.
4. Assisting students to use the internship experience to shape their career plan.

Internship (498R) Timeline:

1. Start Internship Search:

❖ An ECE student must start searching for internship prior the semester he/she intends to enroll for it.

    ○ For example, if the ECE student intends to enroll for the 499 course in **Fall 2020** semester, the student must start searching for internship from preceding **Summer 2020** semester and secure it by end of **Summer 2020** semester.

❖ An ECE student must secure an internship related with his major (CSE/EEE/ETE). There are numerous resources in and out of NSU to help ECE students for such purpose.

a. Inside NSU:

1. CPC@NSU:
Career Placement Center (CPC) of NSU team at NSU is dedicated to assisting NSU students in all phases of internship (and job) search. Some of their services include:

- Resume/CV & Cover Letter writing
- Mock Interviews
- Job/Internship searching tips
- Arranging Career Fairs
- Sharing Job/Internship postings

2. Office of Industrial Relations (OIR), ECE/SEPS:

ECE department itself has a dedicated faculty advisor for industrial relations, focusing on internship and career placement for ECE students.

b. Outside NSU:

ECE students can use several resources outside NSU to help them secure engineering internships. For example:

- **Linkedin:** Several well-reputed companies in Bangladesh post internship openings at linkedin.
- **Job sites:** Sometimes companies will post internship openings at local job sites like BDJobs etc.
- **Social Media:** A lot of companies use social media platforms like Facebook/Glassdoor to post their job/internship recruitments for free.
- **Viva voce** (Word of mouth).

However, it is ultimately the student's responsibility to find an engineering internship.

2. Things to do before Enrolling in 498R

a. Once the student decides for internship, he/she needs to collect Application Package from the department:
   i. Collect No Objection Certificate (NOC) [Form ID: **NOC.001**]
   ii. Collect 498R Internship form [Form ID: **INF.001**]
   iii. Collect Parental/Guardian Consent form [Form ID: **CF.001**]
b. Complete NOC certificate and get it signed by department chair / program coordinator
   i. Keep the original NOC copy with the student. NOC needs to be presented to the company during internship interview.
c. Once the internship is confirmed, the student must:
   i. Obtain an internship offer letter from the company.
      1. The letter must be on the company's letter head.
      2. Must include the intern student's name (to whom the offer is being extended).
      3. Must include intern starting date and duration (ending date).
      4. Contact person's information.
      5. Sign and dated by a representative of the company.
   ii. Fill up **INF.001** form.
      1. Obtain site supervisor's signature after filling up internship details in relevant spaces.
      2. Provide a copy of signed, completed form to academic supervisor and ECE department.
      3. Retain a copy for attaching with final internship report.
d. Select an academic supervisor.
   i. Review the internship details with the academic supervisor by showing **INF.001** form.
   ii. If academic supervisor approves the details, then he/she will provide signatures on **INF.001** forms.
   iii. If the academic supervisor suggests modifications to the details, redo the **INF.001** form (step **2.c.ii**) and repeat step **2.d.i**.
e. When the following cases are applicable, the students must get the consent form signed by parent / guardian.

Consent form requirement cases:

   i. The student does his/her internship in heavy industries like power plants / manufacturing that requires to meet safety criteria.
   ii. The student is relocating / visiting outside of Dhaka for internship purposes.

3. Register / Enroll for the Internship Course

Once the above procedures are completed, the student needs to enroll CSE498R/EEE498R/ETE 498R during course advising. The student then needs to submit the form **INF.001** attached with the advising slip and if required the form **CF.001** to the department. Submitting these forms completes the registration process of 498R.

4. **Perform the Internship**

The student must work a minimum of 320 hours over the course of at least 8-12 calendar weeks. (Note: Working 40 consecutive days will not satisfy this requirement.)

● Any hours worked prior to receiving approval of the student's internship will not count toward fulfilling internship requirement.
● Any hours worked after the course end date will not count toward fulfilling internship requirement.
● The only hours/weeks that will be counted toward fulfilling this requirement are those that occur between the date of the student's internship approval and the course end date.
● The student may work part-time or full-time, paid or unpaid.

5. **Report to Academic Supervisor**

● The intern must report to his academic supervisor once every four weeks according to the supervisor's schedule.
● The supervisor will announce the details of the meeting schedule once the student registers internship under him/her.
● If the student fails to fulfil this requirement, he/she will fail the internship course.

6. **Submit Internship deliverables**

● **Weekly E-Mail Report/Journal:**
  ○ The intern will email a weekly report of his progress to his academic supervisor via email.
    ● The email must be made from the student's designated **@northsouth.edu** account.
    ● The faculty, at his discretion can use alternate electronic portals to collect the weekly reports. In such a case, the students will be provided access to a portal to submit the weekly report. Registration to such portal must be done using NSU's official email and information.

  ○ If the intern signs a **NDA (Non-Disclosure Agreement)** with the company
    ● The intern will show the report to his reporting manager, and remove confidential and proprietary information from the report, and then email it to the academic supervisor, keeping the reporting manager in CC.

  ○ The weekly report should include the following:

    ■ Daily work done. This should be broken down by each day.
    ■ Learning and achievement over the week.
      ○ What engineering processes are being followed that are related to the intern's field of study? (For example, if a software engineering student is doing a software engineering intern - is he following Scrum/Agile/Waterfall methodology?)

- ■ Observations / Reflections and Roadblocks
  - ○ What was the intern trying to do?
  - ○ How could the intern have done it better?
  - ○ Any lack of resource faced by the intern?
- ■ Notable Incidents
  - ○ Gossips/slander about workplace should not be included in report.
- ■ Link to academic knowledge, if applicable.
  - ○ If a student has applied a particular knowledge during the internship which he learnt in one of his/her course, the intern should write it up in his report.

● **Final Internship Report:**
  ❖ The intern must submit a final internship report covering the following:
  - ○ A brief overview of the organization, the role and the people.
  - ○ Intern's assignment and contribution to the organization.
  - ○ Technological aspect of the internship - what technologies did the intern use during his internship and how did it relate to his coursework.
  - ○ What lessons the intern has learnt from his/her internship experience.
  - ○ Intern's interaction with his reporting manager and co-workers.
  - ○ Roadblocks encountered by the intern, and how the student has dealt with the difficulties and challenges.
  - ○ How this internship experience has influenced the student's career plans.
  - ○ If the intern had to redo this internship, what would they do differently?
  - ○ **Collection of weekly email reports/Journal as Appendix.**
  - ○ **Completed and signed Learning & Outcome form (LOAF.001) as Appendix.**
  ❖ Interns are required to submit the report within the semester in which the students have started the internship.
  ❖ If the student is unable do so, he/she may request the instructor for an incomplete.
  ❖ However, in that case the student must submit the report by the first month of next semester. Failing to do so will result in an **"F"** grade.

● **Reporting Manager Feedback Form:**
  ❖ Two weeks prior to the end of the internship, the intern must request his industry reporting manager to complete a feedback form (**INT.EVAL.001**).
  ❖ In the form, the intern's reporting manager will indicate the number of weeks and hours that the intern worked.
  ❖ The reporting manager should be reminded to complete the form by the course end date. The student intern cannot pass the 498R course without it.
  ❖ The Reporting manager should sign the form and hand it to the student in a sealed envelope. The student will submit the sealed envelope to his faculty supervisor.
    - ➢ Alternately, the reporting manager can directly send an email to the faculty supervisor by downloading and filling up the form from online, and scanning the signed copy.

7. <u>Intern Completion Presentation / Exit Viva</u>

a) The intern should make a formal presentation to his faculty supervisor at the end of the intern.

    i. If the intern signs a Non-Disclosure Agreement with the company, and the report/presentation contains sensitive information, then the presentation can be made at the company premise, in presence of the industry reporting manager.

    ii. Before the Exit Viva presentation, the intern should print a copy of **EV.001** form and bring it to the faculty supervisor for evaluation.

b. During the presentation, the faculty supervisor will ask questions about the internship.

    i. Recommended questions are set in **EVQ.GUIDE.001** document.

    ii. During the questionnaire, the faculty will fill up the **EV.001** form and use it for the student's internship assessment process.

<u>Assessment</u>

Once the intern completes the internship, and the reporting manager submits the feedback form, the student intern will be assessed by the following criteria by the designated academic supervisor-

Assessment Tools	Weightage (%)
Weekly Report	20%
Periodic Progress Meeting (At Most 1 per month)	10%
Evaluation by the Company	30%
Final report	30%
Final presentation / Exit Viva	10%
Total	**100%**

Final Report Assessment Criteria:

1. **Does the report provide sufficient evidence of organizational learning?**

   - Technical skills (e.g., learned how to use a software, learnt a new methodology, and learnt operating a new equipment)
   - Analytical skills (e.g., judging the effectiveness of a program or initiative)
   - People skills (e.g., communication skills, interpersonal skills, conflict management)
   - Personal development (e.g., time management, professionalism, multitasking)

2. **How has the student contributed to the organization?**
   - Process improvement/ product development/ system analysis etc.
   - Everyday operations
   - Action research/ diagnostics
   - Skill or knowledge transfer

   (Some of the above should be quantifiable. Such as number of lines of code, number of modules developed, number of customer meetings attended etc.)

3. **Does the student compare and contrast academic learning with experiential learning?**
   - What was found to be different in practice as compared to theory taught in class
   - What was missing from academic training that could have helped at the workplace?

4. **Does the student provide a critical analysis of the organization and environment?**
   - Assessment of organizational culture, work environment, department, coworkers, supervisors
     - The issue of person –organization fit
       (Direct personal/ ad hominem attacks are not professional)
   - Critique the type, quality and quantity of work required to do.
   - Use critical incidents and sufficient examples to make coherent, convincing arguments.

5. **Has the student reflected sufficiently on how the internship experience should modify the career plan?**
   - Motivation factors (compensation/ growth prospects…..)
   - Analysis of alternatives/ options

6. **Does the student demonstrate exceptional writing skills?**

7. **Does the student show creativity, such as providing samples of work or innovative structures and layout to convey information?**