Course Objective & Outcome Form

Department of Electrical and Computer Engineering
School of Engineering and Physical Sciences
North South University,
Bashundhara, Dhaka-1229, Bangladesh

1. **Course Number:** CSE 299
2. **Course Name:** Junior Design Course
3. **Number of Credits:** 1.0
4. **Course Type:** Mandatory, Lab
5. **Instructor:** Ahmed Fahmin (AFn1)
6. **Office Location:** TBA
7. **Office Hours:** S 09:40 AM – 11:10 PM
8. **Contact Hours:** Lectures: 1.5Hrs/Week
9. **Semester:** Fall 2021
10. **Lectures:** Sec 14: T 09:40 AM – 11:10 PM Room: SAC502
11. **Online Resource:**
    a. GitHub for Education
    b. Canvas

12. **Course Summary:**

This is an intermediate level design course, after a student has gathered sufficient experiences on programming, algorithms, data structures up to 200 level core courses, core math, and core science courses.

This "Junior Design Course" involves multidisciplinary teams of students who build and test IOT devices, websites, mobile apps (IOS and android) or engineering processes. Design projects selected from proposal submitted by the students, or recommended by the course instructor, or textbook design problems. The instructor acts as supervisor and assists the students in design team formation and organization, design proposal preparation, implementation of design process, project scheduling

and management, design reviews, design simulation and testing, preparation of drawings, specifications, etc.

Performances are evaluated by oral presentation of proposal and demonstration of completed projects, report writing, effective use of computing knowledge, design process, project management and scheduling etc.

13. **Course Learning Outcomes:**

Upon successful completion of this course, students should be able:

- To identify an engineering and/or computing problem, build appropriate platform/software to solve the problem in a systematic way with given constraints of resources, budget, time etc.
- To select appropriate software/tools to implement the solution.
- To form project group to develop a product or solve engineering problem, be responsible and exercise leadership for fulfilling project goal
- To write proposal and completed project reports, give presentation and demonstrate project findings
- To manage finances and develop realizable timeline for a successful completion of project in a multidisciplinary team.

14. Marks Distribution:

Item	Weight
Project Idea	5%
Project Proposal	15%
Weekly Design Process	35%
Intermediate Report & Presentation	10%
Final Project Presentation and Demo	15%
Final Report	15%
Member's Feedback	5%

15. Schedule

Lecture	Topic	Contents
1	Objective of the course, Group Formation	
2	Presentation of ideas of each group: 5 min presentation 5 min Q&A	
3	Presentation on Important project management tools: Git, Github/Bitbucket/GitLab, MS Word, Latex, Trello ; Relevant IDEs ; Others – Budget, Gantt Chart	
4	Presentation on initial planning / design 5 min presentation 5 min Q&A	
5	Presentation on progress 5 min presentation 5 min Q&A	
6	Presentation on progress 5 min presentation 5 min Q&A	
7	Presentation on progress 5 min presentation 5 min Q&A	
8	Presentation on progress 5 min presentation 5 min Q&A	
9	Presentation on progress 5 min presentation 5 min Q&A	
10	Presentation on progress 5 min presentation 5 min Q&A Upto this point, all the implementation should be completed with some experiment / result / debugging incomplete	

11	Final Presentation 15-17 minute presentation 5-7 minute Q&A	

16. Grading

Numerical Score	Letter Grade	Grade Points Per Credit
>= 93	A Excellent	4.0
90 – 92	A-	3.7
87 – 89	B+	3.3
83 – 86	B Good	3.0
80 – 82	B-	2.7
77 – 79	C+	2.3
73 – 76	C	2.0
70 – 72	C-	1.7
67 – 69	D+	1.3
60 – 66	D Poor	1.0
0 – 59	F*	0.0
	I** Incomplete	0.0
	W** Withdrawal	0.0
	R** Retaken	0.0

* Credits for courses with this grade do not apply towards graduation.
** Credits for courses with this grade do not apply towards graduation and they are not accepted in the calculation of the grade point average.

The exact cut off points for assigning letter grades is at the discretion of individual instructor.

17. **Policy:**

a. **General:**

The instructor will supervise projects on a diverse array of topics, some of which may be completely out of the instructor's areas of expertise. The instructor will focus more on project methodology and guide the students accordingly. The instructor may give lectures during some lab times on project development methodologies. Some of the related topic (but not limited to) would be

1. Creativity
2. Design Process
3. Design Planning
4. Social Context of Design
5. Engineering Ethics
6. How to Write Project Proposal/Reports/Technical Manuals etc.

b. **Academic Honesty:**

Any means of unauthorized assistance in preparing materials which a student submits as original work is deemed to be cheating and constitutes grounds for disciplinary action. Instructors are expected to use reasonably practical means of preventing and detecting cheating. Any student judged to have engaged in cheating might receive a reduced grade for the work in question, a failing grade in the course, or such other lesser penalty, as the instructor deems appropriate. Serious instances may be referred to the Disciplinary Committee in the Office of the Vice Chancellor.

c. **Attendance Policy:**

Attendance in classes is integral to the success of a student in this course. Nevertheless, if a student needs to miss a class for unavoidable reasons, the student must email the instructor prior to the class period stating the reason for being absent. In case the student fails to notify the instructor because of illness or other unavoidable reasons, certification such as a doctor's certificate may be necessary to get the absence excused. A partial unexcused absence may result from the following behaviours:

- A weak excuse for missing the class for which a prior e-mail message was sent.
- Coming late or leaving early.
- Disruptive behaviour that results in instructor asking the student to leave for the rest of the period.

Email Policy:

- When sending an email to the instructor, all emails must be from your northsouth.edu account.
- Your emails must have a clear subject and body. Blank subject or body emails will be deleted without reading.
- Emails must end with your name, ID, roll number, and which section you are from.
- Instructor Email: ahmed.fahmin@northsouth.edu

Office Hour Policy:

- When setting up appointments for meeting in office hours, you need to send an email and set up an appointment beforehand.
- No meetings will be solicited without prior appointments.