

# Group Project

ECE 478/ECE 570 Principles of Communication Systems

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Date: 02/26/2025

Due date: 04/28/2025

Section: Design, Analysis, Simulation, and Verification of Modulators

Submission Instructions: Submit a comprehensive report

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**Question (01):** SO5-COOPERATE: KPI - 5.1 (goals) and 5.2 (diversity and inclusion)

This is a group project in which the students collaboratively design and implement three amplitude modulators (AM), namely (i) classical AM, (ii) DSB-SC AM, and (iii) SSB AM by using TIMS hardware platform and verifying their designs and performance metrics by developing Matlab-based simulators.

- (a) [SO5.1] Each group must consists of at least two students. Group members must establish goals of the project through a discussion with the instructor, plan a timeline, identify main tasks involving in the project and work collaboratively to meet the design objectives.
- (b) [SO5.2] When forming student groups, a special attentions must be given to the diversity of group members. To this end, it is required that a student group consists of more than one person working toward the specified project goal and should include individuals of diverse backgrounds, skills, or perspectives. Group members must cooperate to creates a collaborative and inclusive environment to accomplish the final objective of the project.