TKE213204

Capstone Project 1 Proyek Perancangan Teknik Elektro 1

BASIC INFORMATION

Course Credit	2 / 100 minutes per Week
Course Type	Required
Course Classification	Engineering Topics
Prerequisites	Electrical Engineering Junior Projects

STUDENT AND LEARNING OUTCOMES

Covered Student Outcomes

Engineering Design (KP.3)

Multidisciplinary Teamwork (SK.3)

Development of Engineering Solution (KP.2)

Learning Outcomes

- LO1 Students are able to identify general problems as complex engineering problems that allow for open ended solutions
- LO2 Students are able to evaluate feasible solutions based on engineering processes and standards
- LO3 Students are able to design and allocate resources (human, facilities, financial, etc.) to support the selected solution

COURSE DESCRIPTION

This project is aimed to give major design experience for students. In this project, a real problems with open ended solution are offered and need to be solved by students in group. The group is recomended to be formed from 3 programs (electrical engineering, information technology and biomedical engineering, or other programs) in order to obtain the broader view and better solution. In Capstone Project 1 students must be able to propose comprehensive engineering solution in form of Capstone Project Proposal. The proposal will undergo elegibility review for implementation in the next semester.

TOPICS

- 1. Problem identification
- 2. Evaluation of feasible solutions
- 3. Design and allocation of resources

REFERENCES

- [1] Marin, John A., James E. Armstrong Jr, and James L. Kays. "Elements of an optimal capstone design experience." Journal of Engineering Education 88.1 (1999): 19-22.
- [2] Howe, Susannah, and Jay Goldberg. "Engineering Capstone Design Education: Current Practices, Emerging Trends, and Successful Strategies." Design Education Today. Springer, Cham, 2019. 115-148.