Course Code	TKIE161103P
Course Name	Fundamentals of Programming Lab Work
Course Instructors	**Adhistya Erna Permanasari**
Course Type	Required
Course Classification	Engineering Topics
Credit / Contact Hour per Week	1 / 50 minutes per Week
Course Description	The main purpose of this course is to encourage students' technical and analytical skills in implementing basic programming concepts to solve various problems.
Prerequisites Courses	Fundamentals of Programming (TKIE161103)
Covered Student Outcome	**Development of Engineering Solution (b)** **Data and Experiment (d)** **Modern Tools Utilization (e)** **Multidisciplinary Teamwork (h)**

Learning Outcome	1. Students are able to implement and analyze the use of data types and operators in C / C ++. 2. Students are able to apply and analyze the concept of selection control structure, recurrence control, recursive, and combinations. 3. Students are able to apply and analyze the concept of modularity and communication among modules in C / C ++. 4. Students are able to use and analyze arrays, structures and unions, and dynamic data types in programming.
Topic	1. Introduction to GCC 2. Operator and Data Types 3. Selection Structure 4. Repetition Structure 5. Pointer & Array 6. I/O Function 7. Module 8. Final Projects
Direct Asessment	

Direct Asessment Plan	Measured Learning Outcome
Final Exam	LO1, LO2, LO3, LO4

Indirect Assesment	Questionnaire and direct communication
References	[1] Robertson, L. Anne, 2012, Simple Program Design, Thomson Course Technology, United States of America. [2] B. Tucker, 1995, Fundamentals of Computing I, McGraw-Hill, Inc., United States of America. [3] L. Wear, 1991, "Computers", McGraw-Hill, Inc., United States of America. [4] Hanly, Jeri R., et.al., 1993, Problem Solving and Program Design in C, Addison Wesley Publishing Company.