LEARNING CONTRACT

A. Course Identity

Course Name	: Numerical Method
Course Code	: PMT 257
Credit	: 3 Credits
Semester	: V
Study program	: Mathematics Education
Supporting lecturer	: Molli Wahyuni, Dr, S.Si, M.Pd

B. Course Description

The Numerical Method course discusses the basic concepts of numerical methods, Error, Closed Method: bisection method (bisection), Open Method: newton-Raphson method, secant method, falsi regulation, gauss seidel, gauss pivot, interpolation, approximation, integral both trapezoid, Simpson and Romberg. In addition to studying theory, this course also applies practice using the MATLAB application.

C. Class Rules

1. The minimum attendance of lectures is 80% of the total 16 meetings, except for illness and written permission.
2. There is no remedial test. Follow-up exams are only permitted if authentic permission can be shown after the exam.
3. Students who take lectures offline are not allowed to be late for more than 15 minutes, as well as lecturers, unless previously agreed.
4. Students who take online lectures are required to:
    a. Live video during lectures, and if the video is not active, it is considered absent. Late admit or join in the online meeting link is only allowed no later than 15 minutes after the lecture takes place.
    b. You are not allowed to join lectures if you are traveling or not in a suitable place to study.
5. Students wear neat and polite clothes by upholding the prevailing moral ethical values.
6. Assignments are entered on time, tolerance for late submission of assignments is only one day with the risk of reducing the weight of the value of 20%.

D. Materials to be studied

a. Introduction to Numerical Methods
b. Taylor Series and Error Analysis

c. The bisection method (bisection)
d. False Regulation Method
e. Newton Rahpson method
f. Secant method
g. Gauss Siedel method
h. Gaussian Pivot Method
i. Interpolation
j. Approximation
k. Integral
l. Trapezoid Integral
m. Simpson's Integral
n. Romberg's integral

E. **Reference**

1. John H Mathews & Kurtis D. Fink (1999), Numerical Methods Using. Prince Hall. Upper Sadlle River
2. Todd Young and Martin J. Mohlenkamp, (2021), Introduction to Numerical Methods and Matlab Programming. Ohio University
3. Munir, Rinaldi, (2004). Numerical Method, Informatics Publisher, Bandung,

F. Equipment needed during lectures other than stationery

a. Calculator
b. Microsoft Excel
c. MATLAB App

G. Rating Percentage

Presence (presence)	: 10%
Assignments/Quiz	: 30%
Midterm exam	: 30%
Final exams	: 30%

Kampar, Indonesia, September 6, 2021

Supporting lecturer	Class Representative	Class Representative
(Dr. Molli Wahyuni, S.Si, M.Pd)	(Nur Aqilah binti Mohd Nazri)	(_____)

Known by,
Head of Mathematics Education Study Program

(Astuti, M.Pd)