



COURSE OUTLINE: MTH626 - CALCULUS

Prepared: Mathematics Department

Approved: Sherri Smith, Chair, Natural Environment, Business, Design and Culinary

Course Code: Title	MTH626: CALCULUS
Program Number: Name	4061: AVIATION TECHNOLOGY
Department:	MATHEMATICS
Semesters/Terms:	18F
Course Description:	This course is a continuation of MTH613 and provides the student with a more advanced study of calculus. Topics of study include differentiation and integration of algebraic, trigonometric, exponential and logarithmic functions with an emphasis on applications.
Total Credits:	4
Hours/Week:	4
Total Hours:	60
Prerequisites:	MTH613
Corequisites:	There are no co-requisites for this course.
Substitutes:	MTH577, OEL780
This course is a pre-requisite for:	MTH654
Essential Employability Skills (EES) addressed in this course:	EES 3 Execute mathematical operations accurately. EES 4 Apply a systematic approach to solve problems. EES 5 Use a variety of thinking skills to anticipate and solve problems. EES 10 Manage the use of time and other resources to complete projects.
Course Evaluation:	Passing Grade: 50%, D
Books and Required Resources:	Basic Technical Mathematics with Calculus SI Version with MyMathLab by Washington and Boue Publisher: Pearson Edition: 10 ISBN: 978-0-13-276283-0

Course Outcomes and Learning Objectives:	Course Outcome 1	Learning Objectives for Course Outcome 1
	1. Applications of Integration	1.1 Applications of the Definite Integral 1.2 Areas by Integration 1.3 Volumes by Integration 1.4 Other Applications of Integration
	Course Outcome 2	Learning Objectives for Course Outcome 2
	2. Understanding topics in Trigonometry	2.1 Observe Fundamental Trigonometric Identities 2.2 Recognizing Sum and Difference Formulas 2.3 Recognizing Double-Angle and Half-Angle Formulas 2.4 Solve Trigonometric Equations

Course Outcome 3	Learning Objectives for Course Outcome 3
3. Differentiation of the Transcendental Functions	3.1 Finding Derivatives of Sine and Cosine Functions 3.2 Finding Derivatives of other Trigonometric Functions 3.3 Finding Derivatives of the Inverse Trigonometric Functions 3.4 Finding Derivatives of Logarithmic and Exponential Functions 3.5 Understanding L'Hospitals Rule 3.6 Applications
Course Outcome 4	Learning Objectives for Course Outcome 4
4. Techniques of Integration	4.1 Understanding the General Power Formula 4.2 Understanding the Basic Logarithmic Form 4.3 Understanding the Exponential Form 4.4 Recognizing the Basic Trigonometric Forms 4.5 Recognizing the Other Trigonometric Forms and the Inverse Forms

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight	Course Outcome Assessed
Assignments	30%	
Quizzes	10%	
Tests (4)	60%	

Date:

July 11, 2018

Please refer to the course outline addendum on the Learning Management System for further information.

