

<b>Subject</b>	Mathematics II	<b>Course Code</b>	MA151	<b>Theoretical</b>	4 hrs / wk
<b>Semester</b>	2	<b>Prerequisite</b>	MA150	<b>Practical</b>	0 hrs / wk

### Program Learning Components

<b>Week 1-6</b>	<b>1. Integration</b>
	Definition of indefinite and definite Integration Properties of Integration Integration by substitution Integrals of Inverse Trigonometric functions Trigonometric substitutions Further Substituting Powers of Trigonometric functions Completing the square Partial Fractions Integration by Parts
<b>Week 10-7</b>	<b>2. Applications of Integration</b>
	Area under a curve Area between 2 curve Area under a curve (method Riemann) compute the arc length of a function Numerical Integration (Trapezoidal and Simpsons Rules)
<b>Week 14-11</b>	<b>3. Complex Numbers</b>
	Introduction to complex numbers Cartesian Representation of complex numbers Complex Number Arithmetic Modulus , complex conjugate , Division The Argand Diagram Complex Equations De Moivres theorem Eulers Rule Roots of Complex Numbers

**Course Assessment:**

Course Work	Mid-Term Tests	Final Examination
10	30	60

**Text books:**

1. Calculus by Anton, Bivens, Davis, 8<sup>th</sup> Edition.
2. Linear Algebra by Seymour Lipshutz.
3. Calculus and Analytical Geometry by Fisher and Ziebur.