

Course Code	Course Title	C	H	I	E	T
17UIMMC1	Calculus	4	4	25	75	100

Unit I Successive and Partial Differentiation **12 Hrs**

Higher derivatives - n^{th} derivatives - Leibnitz's theorem (without proof) – Partial differentiation – Problems.

Unit II Application of Differentiation **12 Hrs**

p-r equation-Curvature – Radius of curvature – Evolutes – Envelopes – Maxima and minima for functions of two variables.

Unit III Evaluation of Integrals **12 Hrs**

Evaluation of definite integrals - Properties– Integration by parts - Reduction formulae – Problems.

Unit IV Double and Triple Integrals **12 Hrs**

Double integrals - Evaluation of double integral – Triple integrals – Change of variables.

Unit V Beta and Gamma functions **12 Hrs**

Definition – Properties of Beta and Gamma functions – Problems.

Text Book(s)

1. S. Arumugam, Calculus, 2011 Edition, New Gamma Publishing House

Reference(s)

1. T. K. Manicavachagom Pillay Differential Calculus, 2003 Edition, S. Viswanathan (Printers & Publishers) Pvt. Ltd.
2. T. K. Manicavachagom Pillay, Integral Calculus 2000 Edition, S. Viswanathan (Printers & Publishers) Pvt. Ltd.