Semester	Code	Module Title	Credits	C/E/O	GPA/NGPA
7,8	MA4120	Advanced Differential Equations	3	E	GPA

Hours/Week		Pre-requisites/Co-requisites	Evaluation (%)	
Lecture	**Tute/Lab**		**CA**	**WE**
3	0	MA2014	30	70

Learning Outcomes

After the successful completion of this course students should be able to
- Understand the basic concepts of Existence, Uniqueness and Stability of the solutions of ODEs
- Use advanced methods to solve ODEs.

Syllabus Outline

- Green's Function
- Sturm-Liouville Theory
- Existence, Uniqueness, Continuity and Comparison of Solutions
- Phase Plane Methods
- Group Theoretic Methods
- Asymptotic Methods
- Stability, Instability and Bifurcations
- An Introduction to Chaotic Systems