Graph Theory

SWAYAM Prabha Course Code: R21

PROFESSOR'S NAME	Dr. L. Sunil Chandran
DEPARTMENT	Computer Science and Automation
INSTITUTE	IISc Bangalore
COURSE OUTLINE	In computer science, graph theory is used extensively. The intension of this course is to introduce the subject of graph theory to computer science students in a thorough way. While the course will cover all elementary concepts such as coloring, covering, hamiltonicity, planarity, connectivity and so on, it will also introduce the students to some advanced concepts. **Course Outline** 1. Vertex Cover 2. Matchings 3. Pathcover 4. Connectivity 5. Hamiltonicity 6. Vertex Coloring 7. Edge Coloring 8. Other Colouring Problems 9. Perfect Graphs 10. Planar Graphs 11. Other special Classes of graphs 12. Network flow 13. Introduction to minor theory 14. Probabilistic Methods: Basics 15. Markov, Chebishey Inequalities 16. Lovasz Local Lemma 17. Random graph