	Lecture Plan								
Name of the college: Government College of Arts, Science and Commerce, Sanquelim- Goa									
Nome	f Fooulty, Dr S	oger Neroven I	Dotil	Subject: Chemistry					
Name of Faculty: Dr. Sagar Narayan Patil     Subject: Chemistry									
Paper code: CHC-202 ;: Organic Chemistry I       Program: SYBSc       Division: -									
Acaden	Academic year: DEC 2024- 2025 Semester: IV				Tot	Total Lectures: 30			
Course Objectives:									
<ul> <li>2. To apply knowledge of UV-Visible spectroscopy in calculating absorption values.</li> <li>3. To understand stereochemistry of organic compounds.</li> <li>Student Learning Outcome:</li> <li>At the end of the course, students will be able to</li> <li>1. Explain the preparation and reactions of carboxylic acids and amines.</li> <li>2. Identify conjugation and calculate λmax of organic compounds.</li> <li>3. Draw stereoisomers of organic compounds.</li> <li>4. Assign E/Z and R/S configuration to organic compounds.</li> </ul>									
Month	Lecture From	Lecture To	No. of lecture s allotted	Topic, Subtopic to be covered	Exercise/ Assignment	ICT Tools	Reference books		
December	09/12/2024	21/12/24	2	UV –Visible Spectroscopy in Organic Chemistry	Structures and problems, theories	PPT/ Smart Board	Kemp, W., <i>Organic spectroscopy</i> , 3rded., Palgrave Macmillan, New York, USA, 1991.		

				Introduction to spectroscopy: UV Spectroscopy: Beer			<ul> <li>2. Pavia, D. L., Lampman, G. M. and Kriz, G. S., <i>Introduction to</i> <i>Spectroscopy</i>, 3rded., Thomson Learning, Fort Worth, USA, 2001.</li> <li>3. Silverstein, R. M. and Webster, F., <i>Spectrometric Identification of</i> <i>Organic Compounds</i>, 5thed., John Wiley &amp; Sons, New York, USA, 1991.</li> </ul>
January	03/01/2025	31/01/2025	8	Introduction to spectroscopy: UV Spectroscopy: Beer-Lambert's law (statement, expression and terms involved), Types of electronic transitions, Intensity of absorption, Chromophores and Auxochromes with examples, $\lambda$ max, Bathochromic and Hypsochromic shifts, hypochromic and hyperchromic effects. Visible Spectroscopy: Effect of conjugation on colour: w.r.t benzene, nitrobenzene, <i>p</i> -nitroaniline and $\beta$ - Carotene. Application	<b>ISA-I</b> preparation Assignment	Smart Board	<ul> <li>7. Finar,I. L., Organic Chemistry(Vol. II), 3rded., Longmans, London, UK, 1964.</li> <li>8. Morrison, R.T., Boyd, R.N. and Bhattacharjee, S. K., Organic Chemistry, 7thed., Pearson, Bangalore, India, 2010.</li> <li>9. Bahl, A. and Bahl, B.S., Advanced Organic Chemistry, S. Chand, New Delhi, India, 2012.</li> <li>10. Carey, F., Organic Chemistry, 4thed., McGraw Hill, New York, USA, 2000.</li> </ul>
February	01/02/2025	28/02/2025	8	Carotene. Application of 1 Woodward -Fieser rules for calculation of $\lambda$ max for the following systems: $\alpha,\beta$ unsaturated aldehydes, ketones. Conjugated dienes: alicyclic, homoannular and heteroannular, extended conjugated systems (aldehydes, ketones and dienes)	<b>4ISA-II</b> preparation TEST UV problem solving	Smart Board	Listed as above

March	01/03/2025	31/03/2025	8	Conformational isomerism. Conformations with respect to ethane. Interconversion of Wedge Formula, Newmann, Sawhorse and Fischer representations. Concept of chirality (upto two carbon atoms). Configuration: Geometrical and Optical isomerism; Enantiomerism, Diastereomerism and Meso compounds. Threo and erythro; D and L; cis –trans nomenclature; Cahn Ingold Prelog Rules: R/ S (for upto 2 chiral carbon atoms) and E / Z Nomenclature (forupto two C=C systems). <b>Electrophilic substitution of aniline</b> : nitration, bromination, sulphonation. Diazonium salts: Preparation from aromatic amines, conversion to benzene, phenol, chlorobenzene, bromobenzene. Preparation of azo dye of aniline with $\beta$ -naphthol.			Listed as above
April	01/04/2025	11/04/2025	3	Revision, paper solving	revisions problems therein	Smart Board	