

Semester Lecture Plan

Name of College: Government College of Arts, Science & Commerce, Sanquelim Goa

Name of Faculty: Dr. Vaibhav Chindarkar

Subject: Zoology

Paper code: ZOO 301

Program/Course: Human Physiology

Division: A

Academic year: 2026 - 2027

Semester: V

Total Lectures: 45

Course Objectives:

1. Understanding the physiology of the human body.
2. Familiarising with internal milieu fixity in humans.
3. Develop an understanding of the mechanisms behind physiological processes.
4. Evaluate physiological wellbeing from experimental data.

Expected Course Outcome: At the end of this course, students will be able to:

1. Describe the role of different organ systems in the human body.
2. Explain the various physiological processes.
3. Appreciate the working of the human body.
4. Understand the various physiological mechanisms in the human body.

Month	Lectures From: To:		No. of lectures allotted	Topic, Subtopic to be covered	Learning outcome	ICT Tools	Reference books
June	19/06/2026	20/06/2026	0	No lecture in this period		Power point presentation	A.C. Guyton & J.H. Hall (2011); A.P. Krishna (2015); H.A. Harper (2010); Ganong's Review of Medical Physiology (2011)
July	22/06/2026	27/06/2026	3	L1 Organisation of alimentary canal L2 Tongue, pharynx & oesophagus L3 Stomach	Understand digestive tract organisation	Power point presentation	A.C. Guyton & J.H. Hall (2011); A.P. Krishna (2015); H.A. Harper (2010); Ganong's Review of Medical Physiology (2011)
	29/06/2026	04/07/2026	3	L4 Small intestine L5 Large intestine L6 Salivary glands	Describe digestive organs and glands	Power point presentation	A.C. Guyton & J.H. Hall (2011); A.P. Krishna (2015); H.A. Harper (2010); Ganong's Review of Medical Physiology (2011)

				L7 Liver & gall bladder L8 Pancreas L9 Peristalsis and control			A.C. Guyton & J.H. Hall (2011); A.P. Krishna (2015); H.A. Harper (2010); Ganong's Review of Medical Physiology (2011)
					Explain accessory glands and motility	Power point presentation	
06/07/2026	11/07/2026	3					
				L10 Control of digestive secretions L11 Digestion of carbohydrates L12 Digestion of lipids & proteins			A.C. Guyton & J.H. Hall (2011); A.P. Krishna (2015); H.A. Harper (2010); Ganong's Review of Medical Physiology (2011)
					Explain digestion and absorption	Power point presentation	
13/7/2026	18/7/2026	3					
				L13 Absorption mechanisms L14 Module I revision L15 Test/Recapitulation			A.C. Guyton & J.H. Hall (2011); A.P. Krishna (2015); H.A. Harper (2010); Ganong's Review of Medical Physiology (2011)
					Consolidate Module I	Power point presentation	
20/07/2026	25/07/2026	3					

				L16 Types of muscles L17 Striated muscle structure L18 Smooth muscle structure			A.C. Guyton & J.H. Hall (2011); A.P. Krishna (2015); H.A. Harper (2010); Ganong's Review of Medical Physiology (2011)
	27/07/2026	01/08/2026	3		Differentiate muscle types	Power point presentation	
				L19 Cardiac muscle L20 Sarco-tubular system L21 Properties of muscle			A.C. Guyton & J.H. Hall (2011); A.P. Krishna (2015); H.A. Harper (2010); Ganong's Review of Medical Physiology (2011)
					Understand muscle anatomy and properties	Power point presentation	
August	03/08/2026	08/08/2026	3				
				L22 Excitability & contractility L23 All-or-none law L24 Summation			A.C. Guyton & J.H. Hall (2011); A.P. Krishna (2015); H.A. Harper (2010); Ganong's Review of Medical Physiology (2011)
					Explain muscle responses	Power point presentation	
	10/08/2026	15/08/2026	3				

	17/08/2026	22/08/2026	3	L25 Tetany & fatigue L26 Refractory period L27 Muscle proteins	Explain muscle physiology	Power point presentation	A.C. Guyton & J.H. Hall (2011); A.P. Krishna (2015); H.A. Harper (2010); Ganong's Review of Medical Physiology (2011)
	24/08/2026	29/08/2026	3	L28 Sliding filament theory L29 Isometric & isotonic contractions L30 Module II revision	Understand contraction mechanisms	Power point presentation	A.C. Guyton & J.H. Hall (2011); A.P. Krishna (2015); H.A. Harper (2010); Ganong's Review of Medical Physiology (2011)
	31/08/2026	05/9/2026	3	L31 Organisation of respiratory system L32 Mechanism of ventilation L33 Lung compliance	Explain respiration	Power point presentation	A.C. Guyton & J.H. Hall (2011); A.P. Krishna (2015); H.A. Harper (2010); Ganong's Review of Medical Physiology (2011)
September	07/9/2026	12/9/2026	3	L34 Lung volumes and capacities L35 Ventilation-		Power point presentation	A.C. Guyton & J.H. Hall (2011); A.P. Krishna

				perfusion ratio L36 Transport of O ₂ and CO ₂	Interpret respiratory parameters		(2015); H.A. Harper (2010); Ganong's Review of Medical Physiology (2011)
	21/9/2026	26/9/2026	3	L37 O ₂ dissociation curve L38 CO ₂ dissociation curve L39 Regulation of respiration	Explain gas transport	Power point presentation	A.C. Guyton & J.H. Hall (2011); A.P. Krishna (2015); H.A. Harper (2010); Ganong's Review of Medical Physiology (2011)
	28/9/2026	3/10/2026	3	L40 Hypoxia, asphyxia, dyspnoea & asthma L41 Lung function test L42 General circulation & hemodynamics	Apply respiratory concepts	Power point presentation	A.C. Guyton & J.H. Hall (2011); A.P. Krishna (2015); H.A. Harper (2010); Ganong's Review of Medical Physiology (2011)
October	5/10/2026	10/10/2026	3	L43 Heart structure L44 Cardiac cycle, cardiac output & BP L45 Module III	Understand cardiovascular function	Power point presentation	A.C. Guyton & J.H. Hall (2011); A.P. Krishna (2015); H.A.

				introduction: urinary system			Harper (2010); Ganong's Review of Medical Physiology (2011)
				Revision of excretory & reproductive system topics Overall course revision			A.C. Guyton & J.H. Hall (2011); A.P. Krishna (2015); H.A. Harper (2010); Ganong's Review of Medical Physiology (2011)
	12/10/2026	14/10/2026	2		Course consolidation	Power point presentation	