



**Children's University**  
**School of Nutrition and Health**  
**Department of Home Science**  
**Gandhinagar**

**ACADEMIC  
 YEAR  
 2020-2021**

**P.G.Diploma in Nutrition and Dietetics**

<b>Year</b>	<b>1</b>	<b>Course Type: Foundation Course</b> <b>Course No: NDF 105</b> <b>Course Title: Physiology (Basic)</b>	<b>Credits</b>	<b>4</b>
<b>Semester</b>	<b>1</b>		<b>Hours/wk</b>	<b>4</b>
<b>Objectives</b>	<ol style="list-style-type: none"> <li>1. To enable the students to understand the relevant issues and topics of human physiology.</li> <li>2. To enable them to understand the integrated functions of all systems and the grounding of nutritional sciences in physiology.</li> <li>3. To understand general structure and functions of various systems in human body.</li> <li>4. To understand structure and functions of various systems in human body under diseased condition.</li> </ol>			
<b>COURSE CONTENT / SYLLABUS - THEORY</b>				
<b>Unit I</b>	<b>Digestive and Excretory System</b> <ul style="list-style-type: none"> <li>• Homeostasis</li> <li>• Regulation of Body temperature</li> <li>• Digestion &amp; absorption of food</li> <li>• Structure and function of Kidney</li> <li>• Nephron and Urine formation</li> </ul>			
<b>Unit II</b>	<b>Circulatory and Respiratory System</b> <ul style="list-style-type: none"> <li>• Blood, blood groups, blood pressure, blood clotting</li> <li>• Structure of Heart and junctional tissues of heart</li> <li>• Cardiac cycle and Types of circulation</li> <li>• Mechanism of respiration</li> <li>• Transport of oxygen and carbon dioxide</li> </ul>			
<b>Unit III</b>	<b>Nervous and Endocrine System</b> <ul style="list-style-type: none"> <li>• Types of nervous system</li> <li>• Types of neuron and Reflex action</li> <li>• Transmission of nerve impulse in nerve fiber and synapse</li> <li>• Types of endocrine glands and its functions Pituitary, thyroid, para thyroid, and adrenal gland</li> <li>• Hormones its action and feedback mechanism</li> </ul>			

<b>Unit IV</b>	<b>Reproductive System</b> <ul style="list-style-type: none"><li>• Types of Chromosome, Kariotype</li><li>• Spermatogenesis and oogenesis</li><li>• Male and Female reproductive system</li><li>• Fertilization of ovum and different stages of fetus Parturition, Stages of labor, Development of breast and secretion of milk</li></ul>
<b>References</b>	
<ol style="list-style-type: none"><li>1. Human Physiology by C C Chatterjee</li><li>2. Textbook of medical physiology by Guyton</li><li>3. Human physiology by Agrawal</li><li>4. માનવ શરીર રચના અને શરીર ક્રિયા અને સુતીકા શાસ્ત્ર</li><li>5. જીવવિજ્ઞાન- લેખકસંઘ્યાબેનપરીખ</li></ol>	