## B.D.S FIRST YEAR

## SUBJECT: HUMAN ANATOMY, EMBRYOLOGY, HISTOLOGY & MEDICAL GENETICS

| Teaching Scheme(Hours) | | | | Credits | Examination Scheme | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | External | | Sessional | | Total |
| Lec(L) | Prac(P) | Clinical(C) | Total | | Theory | Pract | Theory | Pract | |
| 182 | 286 | - | 468 | | 1 | 1 | 3 | 3 | 8 |

## A. COURSE OVERVIEW

The students should gain the knowledge and insight into, the functional anatomy of the normal human head and neck, functional histology and an appreciation of the genetic basis of inheritance and disease, and the embryological development of clinically important structures. Therefore, those relevant anatomical & scientific foundations are laid down for the clinical years of the BDS course.

## B. COURSE CONTENT

| NO | TOPIC | L+P (hrs) | CLs |
|---|---|---|---|
| 1 | INTRODUCTION | 5+0 | CL 1,3,6 |
| 2 | HEAD & NECK | 42+65 | CL 1,2,3,4,5,6 |
| 3 | THORAX | 26+40 | CL 1,2,3,4,5,6 |
| 4 | ABDOMEN | 22+40 | CL 1,2,3,4,5,6 |
| 5 | CLINICAL PROCEDURES | 20+32 | CL4,5 |
| 6 | EMBRYOLOGY | 22+40 | CL 1,2,3,4,5,6 |
| 7 | HISTOLOGY | 30+40 | CL 1,2,3,4,5,6 |
| 8 | MEDICAL GENETICS | 15+20 | CL 1,2,3,4,5,6 |

## C. TEXT BOOKS

## D. REFERENCE BOOKS


1. Richard S. Snell; Clinical Anatomy for Medical Students,5th edition; Little Brown & company,1995.
2. Chummy S. Sinnatamby; RJ LAST'S Anatomy, 12th edition, Churchill Livingstone, 2011.
3. Romanes; Cunningham Manual of Practical Anatomy: Head & Neck & Brain, 15th edition, Oxford Medical publication, 1986.
4. Wheater; burkitt & Daniels; Functional Histology,6th edition, Churchill Livingstone,2013.
5. Sadler; Langman's, Medical Embryology, 14th edition, Lippincott Williams & Wilkins, 2018.
6. James A Anderson; Grant's Atlas of Anatomy, 14th edition, Wolters Kluwer India Pvt Ltd., 2016.
7. Williams; Gray's Anatomy, 38th edition,Churchill Livingstone,1995.
8. Peter Turnpenny, Sian Ellard; Emery's Elements of Medical Genetics, 15th edition, Elsevier publication, 2017.

## E. COMPETENCY LEVEL

| CL Number | Skill | Statement |
|---|---|---|
| CL1 | Knowledge | • Know the normal disposition of the structures in the body while clinically examining a patient and while conducting clinical procedures.<br>• Know the anatomical basis of disease and injury |
| CL2 | Investigations | • Know the sectional anatomy of head neck and brain to read the features in radiographs and pictures taken by modern imaging techniques |
| CL3 | Patient Care: Diagnosis | • Know the microscopic structure of the various tissues, a pre-requisite for understanding of the disease processes. |
| CL4 | Patient Care: Treatment planning | • Ethically Integrate multiple disciplines into an individual comprehensive sequence treatment plan using diagnostic and prognostic information |
| CL5 | Patient Care: Treatment | • To locate various structures of the body and to mark the topography of the living anatomy.<br>• To identify various tissues under microscope and to detect various congenital abnormalities. . |
| CL6 | Research and Innovation | • Upgradation of knowledge and skill from time to time, familiarize with new concept and equipment in this field. |
| CL 7 | Evidence Based Learning | • Consolidate all the above mentioned major competencies acquired during the course and integrate newer evidence based knowledge in displaying expertise in the science of HUMAN ANATOMY, EMBRYOLOGY, HISTOLOGY & MEDICAL GENETICS |

**PROGRAM SPECIFIC OUTCOME (PSO)**

| | | |
|---|---|---|
| PSO1 | DIAGNOSIS | By ethically emphasising on the relevant information the anatomy taught integrally with other basic sciences & clinical subjects not only keeps the curiosity alive in the learner but also lays down the scientific foundation for making a better doctor, a benefit to the society. |
| PSO2 | INVESTIGATIONS | Know the sectional anatomy of head neck and brain to read the features in radiographs and pictures taken by modern imaging techniques |
| PSO3 | TREATMENT | To locate various structures of the body and to mark the topography of the living anatomy while keeping ethical and moral values. |

## F. COURSE MATRIX

| | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PO 13 | PO 14 | PO 15 | PS O1 | PS O2 | PS O3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CL1 | 3 | 3 | 3 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 2 | 2 |
| CL2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 3 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 3 | 3 | 2 |
| CL3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 3 | 2 | 2 |
| CL4 | 2 | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 3 | 3 | 3 |
| CL5 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 1 | 3 | 3 | 3 |
| CL6 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 2 | 2 |
| CL7 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Avg | **2.4** | **2.4** | **2.4** | **2.4** | **2.4** | **2.3** | **2.0** | **2.1** | **1.9** | **1.4** | **1.9** | **1.9** | **1.6** | **1.4** | **1.3** | **3.0** | **2.6** | **2.4** |