



Reference No: FMS/BOS/2022/ 397

Date: 12<sup>th</sup> April 2023

**DEPARTMENT OF MEDICAL ANATOMY**  
**FACULTY OF MEDICAL SCIENCES**  
**MINUTES OF MEETING**

**Institute Name:** Faculty of Medical Sciences

**University:** Tantia University, Sriganganagar

**Date:** 12<sup>th</sup> April 2023

**Time:** 10:30 AM

**Venue:** Dean's office

**Invitees:** Board of Studies (BOS) Committee Members

**Attendees Present:**

S. No.	Name of Members	Designation	Signature
1	Dr. Madhu Singhal	Dean, FMS	
2	Dr. G.N. Trivedi	Professor, Anatomy	
3	Dr. Suchitra Palve	Professor, Physiology	
4	Dr. A.D. Parikh	Professor, Pharmacology	
5	Dr. Suchitra Jain	Professor, Obs & Gynae	
6.	Dr. Praveen Sharma	Director Academics & Research, Tantia University	

**Meeting Agenda:**

1. To discuss the revision of curriculum, Course structure and syllabus of M.Sc. Medical Anatomy Program from the academic session 2023-24
2. To develop the curriculum based on Choice Based Credit System (CBCS), Learning Outcome Based Curriculum Framework (LOCF) for M.Sc. Medical Anatomy.
3. To consider present trend in the respective fields and industry relevant Interdisciplinary Courses.
4. To implement the guidelines and suggestions of the New Education Policy 2020 while preparing the curriculum.
5. To design the curriculum focusing on Skill Development, Employability and Entrepreneurship
6. To consider the Local, Regional, National & global health care needs in the curricula developed & implemented by the University, as per the norms of the Regulatory Bodies.



The meeting started with greetings from Dr. Madhu Singhal, Convener of BOS. He expressed his deep sense of happiness & gratitude for the presence of all the members in the meeting.

The meeting commenced with the permission of the Chair and the following presentation & discussions took place in alignment with the proposed agenda –

**Agenda 1** To discuss the revision of curriculum, Course structure and syllabus of M.Sc. Medical Anatomy Program from the academic session 2023-24

**Resolution:** : Dr. Praveen Sharma Director of Academics & Research Tantia University & Associate Professor, Dept. of Anatomy , Dr. Shyam Sunder Tantia Medical College Hospital & Research Centre placed the curriculum to the BOS for approval. Curriculum is revised as per the recommendations of University Grants Commission, keeping the requirements of MCI & NMC requirements to be fulfilled. He also informed that during the reframing of the curriculum it was designed in accordance to PG syllabus of the respective subjects to keep the academic similarity (Annexure 1). Board went through the curriculum & finalized for the approval of Academic Council.

**Agenda 2:** To develop the curriculum based on Choice Based Credit System (CBCS), Learning Outcome Based Curriculum Framework (LOCF) for M.Sc. Medical Anatomy.

**Resolution:** The Dean suggested that the revision of Curriculum, Course Structure & syllabus of M.Sc. Medical Anatomy Program from the academic session 2023-24 in the light of Choice Based Credit Structure and Learning Outcome based Curriculum Framework. The course curriculum was discussed and finalized for approval of Academic Council to implement from the academic session 2022-23.

**Agenda 3:** To consider present trend in the respective fields and industry relevant Interdisciplinary Courses for M.Sc Medical Anatomy implement from the academic session 2022-23.

Resolution: Interdisciplinary Courses which are relevant to the field were presented by Dr. G.N. Trivedi and subsequently approved by the board (Annexure 3)

**Agenda 4:** To implement the guidelines and suggestions of the New Education Policy



2020 while revising the curriculum.

**Resolution:** It was also discussed that the curriculum, course structure and syllabus must align with the guidelines and suggestions of the New Education Policy 2020. In the light of NEP 2020 the Board finalized the revised curriculum for the approval of Academic Council.

**Agenda 5:** To design the curriculum focusing on Skill Development, Employability and Entrepreneurship

**Resolution:** Whereas, the Board of Study acknowledges the growing need for higher education programs to integrate skill development, employability, and entrepreneurship into their curriculum to better equip students for the dynamic job market and to foster innovation; Whereas, the M.Sc. Medical Anatomy program aims to produce professionals with both a deep understanding of anatomical sciences and the practical skills required to apply this knowledge in clinical, academic, and entrepreneurial settings;

**Be it resolved that,** the curriculum of the M.Sc. Medical Anatomy program shall be revised and designed with a core focus on:

1. **Skill Development:** Emphasizing laboratory techniques, dissections, diagnostic technologies (such as radiology and imaging), digital anatomy, research methodologies, and professional communication.
2. **Employability:** Incorporating hands-on training, internships in medical institutions, hospital anatomy departments, clinical research laboratories, and diagnostic centers to enhance job readiness. The program will also align with current industry trends in medical and healthcare sectors.
3. **Entrepreneurship:** Introducing courses on healthcare management, innovation in medical technology, intellectual property management, and opportunities in the medical equipment and educational sector to inspire entrepreneurial ventures. Business planning and mentorship opportunities shall also be included.

**Resolved further that,** the revised curriculum is developed through collaboration with academic, clinical, and industry experts, ensuring it meets both academic standards and



market demands. The new curriculum be implemented from the academic session 2023-24, with periodic reviews and updates to maintain relevance and industry alignment.

Agenda 6. To consider the Local, Regional. National & global health care needs in the curricula developed & implemented by the University, as per the norms of the Regulatory Bodies.

**Resolved that**, the curricula of M.Sc. Medical Anatomy program must be designed and updated to address healthcare challenges at local, regional, national, and global levels, as per the guidelines provided by the National Medical Council (NMC).

**Resolved further that**, the curriculum focuses on:

1. **Local and Regional Needs:** Addressing healthcare issues specific to the community, such as endemic diseases, public health challenges, and healthcare accessibility.
2. **National Priorities:** Aligning with national health initiatives, policies, and priorities, including those aimed at combating prevalent diseases and improving the quality of healthcare services.
3. **Global Health Trends:** Incorporating global healthcare advancements, emerging diseases, and international best practices to ensure that graduates are prepared to meet global healthcare challenges.

**Resolved further that**, periodic reviews and consultations with healthcare professionals, industry experts, and regulatory bodies will ensure that the curriculum remains relevant and aligned with evolving healthcare needs.

With the above discussion, the Convener of the committee expressed his deep sense of gratitude to all members for their academically vibrant detailed discussion on various agendas. The meeting ended with the Vote of Thanks by the Convener.

Dr. Madhu Singhal

Chairperson BOS & Dean – FMS

DEAN

Dr. S. S. Tantia MCH & RC

Sri Ganganagar (Raj.)

**ANNEXURE**

**M.Sc. Medical Anatomy**

**SYLLABUS PRIOR AND POST REVISION OF THE COURSES DURING THE LAST FIVE YEARS  
SUMMARY SHEET – CURRICULUM OR SYLLABUS COMPARISON**

Sr. No	Codes	Available Course	Code	Revised/Added Course	% of Syllabus Revised
1.	MSA 2201	Basics of Anatomy	MSA 2301	Basics of Anatomy	33%
2.	MSA 2202	Organ Systems Anatomy	MSA 2302	Organ Systems Anatomy	25%
3.	MSA 2203	Basic Organ Systems	MSA 2303	Basic Organ Systems	No Change
4.	MSA 2204	Gross Anatomy of the Human Body	MSA 2304	Gross Anatomy of the Human Body	18%
5.	MSA 2205	Neuroanatomy	MSA 2305	Neuroanatomy	57%
6.	MSA 2206	Histology & Embryology	MSA 2306	Histology & Embryology	36%
7.	MSA 2207	Human Gross & Clinical Anatomy	MSA 2307	Human Gross & Clinical Anatomy	53%
8.		New Elective course	MSA 2311	Recent Advances	100%
9.		New Elective course	MSA 2312	Comparative Anatomy & Evolution	100%

Number of Courses Revised : 08  
Total Number of Courses : 09  
Percentage of Courses Revised : 88.88%

M. Sc. Medical Anatomy

**Syllabus Prior and Post Revision of the courses during the last five years  
Summary Sheet – Curriculum or syllabus comparison**

**RED COLOUR** - Content Removed, **GREEN COLOUR** - Content Added

Sr. No.	Available Course Content	Revised Course & Added Content
1.	<b>Module 1: Basics of Anatomy</b>	<b>Module 1: Basics of Anatomy</b>
	<ul style="list-style-type: none"> <li><b>Anatomical Terminology:</b> Anatomical planes, positions, and clinical terms related to movements.</li> <li><b>Basics of Cytology:</b> Cell membrane structure, organelles, and junctional complexes.</li> <li><b>Musculoskeletal System:</b> <ul style="list-style-type: none"> <li><b>Bones:</b> Classification, morphology, ossification, and blood supply.</li> <li><b>Muscles:</b> Classification, morphology, innervation, and functions.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><b>Anatomical Terminology:</b> Anatomical planes, positions, and clinical terms related to movements.</li> <li><b>Basics of Cytology:</b> Cell membrane structure, organelles, and junctional complexes.</li> <li><b>Basics of genetics:</b> Cell division, mitosis, meiosis, Cell cycle, Chromosomes.</li> <li><b>Musculoskeletal System:</b>  Is shifted to Module 2 under Organ System Anatomy</li> </ul>
	<b>Module 2: Organ Systems Anatomy</b>	<b>Module 2: Organ Systems Anatomy</b>
	<ul style="list-style-type: none"> <li><b>Integumentary System:</b> Layers of skin, skin appendages, blood supply, innervation, and functions.</li> <li><b>Cardiovascular System:</b> Blood vessels' morphology and classification, capillary structure, circulation, and function.</li> <li><b>Nervous System:</b> Overview of the CNS, PNS, cranial and spinal nerves, and autonomic nervous system.</li> <li><b>Endocrine System:</b> Classification, hormones, and their functions.</li> <li><b>Lymphatic System:</b> Lymph</li> </ul>	<ul style="list-style-type: none"> <li><b>Musculoskeletal System:</b>   <b>Bones:</b> Classification, morphology, ossification, and blood supply.   <b>Muscles:</b> Classification, morphology, innervation, and functions.</li> <li><b>Integumentary System:</b> Layers of skin, skin appendages, blood supply, innervation, and functions.</li> <li><b>Cardiovascular System:</b> Blood vessels' morphology and classification,</li> </ul>



	formation, circulation, and ducts (Thoracic duct).	capillary structure, circulation, and function. <ul style="list-style-type: none"> <li>• <b>Nervous System:</b> Overview of the CNS, PNS, cranial and spinal nerves, and autonomic nervous system.</li> <li>• <b>Endocrine System:</b> Classification, hormones, and their functions.</li> <li>• <b>Lymphatic System:</b> Lymph formation, circulation, and ducts (Thoracic duct).</li> </ul>
	<b>Module 3: Basic Organ Systems</b>	<b>Module 3: Basic Organ Systems</b>
	<ul style="list-style-type: none"> <li>• <b>Digestive System:</b> Gross anatomy and functions of digestive organs.</li> <li>• <b>Excretory System:</b> Anatomy of kidneys, ureters, and urinary bladder.</li> </ul> <p><b>Reproductive System:</b> Anatomy of male and female reproductive organs and menstrual cycle</p>	<ul style="list-style-type: none"> <li>• <b>Digestive System:</b> Gross anatomy and functions of digestive organs.</li> <li>• <b>Excretory System:</b> Anatomy of kidneys, ureters, and urinary bladder.</li> </ul> <p><b>Reproductive System:</b> Anatomy of male and female reproductive organs and menstrual cycle</p>
	<b>Module 4: Gross Anatomy of the Human Body</b>	<b>Module 4: Gross Anatomy of the Human Body</b>
	<ul style="list-style-type: none"> <li>• <b>Superior Extremity:</b> Muscles, joints, and neurovascular structures.</li> <li>• <b>Inferior Extremity:</b> Bones, muscles, nerves, and vasculature.</li> <li>• <b>Thorax:</b> Heart, lungs, and major vessels.</li> <li>• <b>Abdomen:</b> Abdominal viscera and their anatomical relationships.</li> <li>• <b>Pelvis:</b> Pelvic organs, musculature, and neurovascular structures.</li> <li>• <b>Head, Neck &amp; Face:</b> Anatomical components including sensory organs.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Superior Extremity:</b> Bones, Muscles, joints, and neurovascular structures.</li> <li>• <b>Inferior Extremity:</b> Bones, muscles, nerves, and vasculature.</li> <li>• <b>Thorax:</b> Thoracic viscera in their anatomical relations.</li> <li>• <b>Abdomen:</b> Abdominal viscera and their anatomical relations.</li> <li>• <b>Pelvis:</b> Pelvic organs, musculature, and neurovascular structures.</li> <li>• <b>Head, Neck &amp; Face:</b> Anatomical components including sensory organs.</li> </ul>
2 <sup>nd</sup> Year	<b>Module 5: Neuroanatomy</b>	<b>Module 5: Neuroanatomy</b>
	<ul style="list-style-type: none"> <li>• <b>Brain and Nervous System Development.</b></li> <li>• <b>Sensory and Motor Pathways.</b></li> <li>• <b>Central Autonomic System.</b></li> <li>• Cerebral Hemispheres: White matter, basal ganglia, and gyri.</li> <li>• Circulation of Cerebrospinal Fluid</li> </ul>	(a) Brain, Development of the nervous system, Olfactory and optic pathways, Cochlear- vestibular and gustatory pathways, Motor pathways, Sensory pathways, Central autonomic pathways, Hypothalamo-hypophyseal system:



	<p>(CSF).</p> <ul style="list-style-type: none"> <li>Blood Supply of Brain and Spinal Cord.</li> <li>Cross-sectional Anatomy of Brain and Spinal Cord.</li> </ul>	<ul style="list-style-type: none"> <li>Study of spinal cord, medulla oblongata, midbrain, cerebellum, thalamus, hypothalamus, limbic lobe and their functions.</li> <li>Cerebral hemisphere, gyri, sulci, motor and sensory area, white matter, basal ganglia</li> <li>Cranial nerves</li> <li>Circulation of C.S.F.</li> <li>Blood supply of brain &amp; spinal cord</li> <li>Cross sectional anatomy of brain and spinal cord</li> </ul>
	<b>Module 6 : Histology &amp; Embryology</b>	<b>Module 6 : Histology &amp; Embryology</b>
	<ul style="list-style-type: none"> <li><b>Microanatomy:</b> Tissue block preparation, staining, and identification of abnormalities.</li> <li>Systemic Histology: Microscopic features and functional correlation of various organs.</li> </ul> <p>Cell Biology: Study of cell structure,</p> <ul style="list-style-type: none"> <li>organelles, and nuclear matrix.</li> <li>Developmental Anatomy: General embryology, genetic influences, and teratogenesis.</li> </ul>	<ul style="list-style-type: none"> <li><b>General Histology:</b> Tissue block preparation, staining, and identification of abnormalities.</li> <li><b>Systemic Histology:</b> Microscopic features and functional correlation of various organs.</li> <li><b>Cell Biology:</b> Study of cell structure, organelles, and nuclear matrix.</li> <li><b>Developmental Anatomy:</b> General embryology, Systemic embryology, genetic influences, and teratogenesis.</li> <li>Environmental and genetic influences on normal growth and development,</li> <li>Teratogenesis.</li> <li>Genetics.</li> <li>Recent Advances.</li> <li>Comparative Anatomy &amp; Evolution.</li> </ul>
	<b>Module 7 : Human Gross &amp; Clinical Anatomy</b>	<b>Module 7 : Human Gross &amp; Clinical Anatomy</b>
	<ul style="list-style-type: none"> <li><b>General Anatomy:</b> Covering detailed anatomy of organs and systems like cardiovascular, nervous, endocrine, lymphatic, digestive, excretory, and reproductive systems.</li> <li><b>Gross Anatomy: Radiological and sectional anatomy of various body parts.</b></li> </ul>	<ul style="list-style-type: none"> <li><b>General Anatomy:</b> Musculo skeletal, covering detailed anatomy of organs and systems like cardiovascular, nervous, endocrine, lymphatic, digestive, excretory, and reproductive systems. Integumentary, Digestive.</li> <li><b>Gross Anatomy:</b> Superior Extremity, Inferior Extremity, Thorax, ABDOMEN, pelvis, Head and neck , Face region.</li> <li>Introduction to CT, MRI, and Ultrasound Imaging Techniques</li> </ul>
	<b>Program-Specific Elective Courses</b>	<b>Program-Specific Elective Courses</b>



	<ol style="list-style-type: none"> <li>1. <b>Functional and Radiological Anatomy.</b></li> <li>2. <b>Genetics and Human Evolution.</b></li> <li>3. <b>Advanced Histology Techniques.</b></li> <li>4. <b>Clinical Anatomy &amp; Imaging Techniques.</b></li> </ol>	<ol style="list-style-type: none"> <li>1. <b>Functional, Radiological and Sectional Anatomy.</b></li> <li>2. <b>Genetics and Human Evolution.</b></li> <li>3. <b>Advanced Histology Techniques.</b></li> <li>4. <b>Clinical Anatomy &amp; Imaging Techniques.</b></li> </ol>
	Newly Added Elective	5. <b>Recent Advances.</b>
		<ul style="list-style-type: none"> <li>• <b>Advances in Imaging Techniques:</b> Exploration of the latest developments in anatomical imaging technologies, such as 3D ultrasound, MRI, and CT scans, and their applications in clinical diagnosis and anatomical research.</li> <li>• <b>Stem Cells and Tissue Engineering:</b> Study of the role of stem cells in tissue regeneration and advances in tissue engineering for anatomical structures like cartilage, bone, and organ development.</li> <li>• <b>Molecular Anatomy:</b> Analyzing recent breakthroughs in molecular techniques for studying anatomical structures at the cellular and genetic levels, including CRISPR and gene editing applications.</li> <li>• <b>Neuroanatomy Developments:</b> Insights into the latest research in neuroanatomy, focusing on brain mapping, neural pathways, and advancements in understanding neuroplasticity and neurological disorders.</li> <li>• <b>Digital Anatomy and Virtual Dissection:</b> Integration of digital tools and virtual reality (VR) in anatomical education and research, including virtual dissections and 3D anatomical models for advanced learning experiences.</li> </ul>
	Newly Added Elective	6. <b>Comparative Anatomy &amp; Evolution.</b>
		<p><b>Comparative Vertebrate Anatomy:</b> Examination of the anatomical similarities and differences among vertebrates, focusing on major organ systems like the skeletal, muscular, and circulatory systems across different species.</p> <ul style="list-style-type: none"> <li>• <b>Evolutionary Developmental Biology (Evo-Devo):</b> Study of how evolutionary processes influence the development of anatomical structures, emphasizing gene regulation, developmental pathways, and evolutionary adaptations.</li> </ul>



		<ul style="list-style-type: none"><li>• <b>Homology and Analogy in Anatomy:</b> Understanding the concepts of homologous and analogous structures, tracing the evolutionary relationships and functional convergence of anatomical features in diverse organisms.</li><li>• <b>Fossil Evidence and Evolutionary Trends:</b> Exploration of fossil records to trace the evolutionary history of anatomical structures, with emphasis on transitional forms and key evolutionary innovations in vertebrate anatomy.</li><li>• <b>Comparative Anatomy of Sensory and Nervous Systems:</b> A detailed analysis of the sensory and nervous systems across species, highlighting the evolutionary adaptations that contribute to species survival and specialization.</li></ul>
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