

**Regulations and Curriculum (Modified) for  
Postgraduate Degree Courses in Medical Sciences  
(MD/MS)**

**Amended upto March 2017**

[(As per the Medical Council of India Postgraduate Medical Education Regulations, 2000  
(Amended upto February, 2016)]

Pre-Clinical, Para-Clinical and Clinical subjects

**Subject: MD ANATOMY**



(Deemed to be University under Section 3 of UGC Act, 1956)

(Placed under Category 'A' by MHRD, Govt. of India, Accredited with 'A' Grade by NAAC)

University Enclave, Deralakatte, Mangaluru – 575 018

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## **VISION**

*To build a humane society through excellence in education and healthcare*

## **MISSION**

*To develop*

*Nitte (Deemed to be University)*

*As a centre of excellence imparting quality education,  
generating competent, skilled manpower to face the scientific and  
social challenges with a high degree of credibility, integrity,  
ethical standards & social concern*



**CONTENTS**

	<b>Page No.</b>
Notifications	ii - v
Chapter I : Regulations for Postgraduate Degree Courses in Medical Sciences (MD/MS)	1 - 13
Chapter II : Goals and General Objectives of Postgraduate Medical Education Course	15 - 16
Chapter III : Course Curriculum: <b>MD Anatomy</b>	17 – 24
Reference Books and Journals	25 - 29
Annexures : Checklists	31 - 41



**No. F.9-13/2007-U.3 (A)**  
**Government of India**  
**Ministry of Human Resource Development**  
**(Department of Higher Education)**  
**U.3(A) Section**

Shastri Bhawan, New Delhi,  
Dated: 4<sup>th</sup> June, 2008

**NOTIFICATION**

1. Whereas the Central Government is empowered under Section 3 of the University Grants Commission (UGC) Act, 1956 to declare, on the advice of the UGC, an Institution of higher learning as a deemed-to-be-university;
2. And whereas, a proposal was received in February, 2007 from Nitte Education Trust, Mangalore, Karnataka seeking grant of status of deemed-to-be university in the name of Nitte University under Section 3 of the UGC Act, 1956;
3. And whereas, the University Grants Commission has examined the said proposal and vide its communication bearing No. F.26-10/2007(CPP-I/DU) dated the 10th March, 2008 has recommended conferment of status of 'deemed-to-be-university' in the name and style of Nitte University, Mangalore, Karnataka, comprising A.B. Shetty Memorial Institute of Dental Sciences, Mangalore;
4. Now, therefore, in exercise of the powers conferred by section 3 of the UGC Act, 1956, the central Government, on the advice of the University Grants Commission (UGC), hereby declare that Nitte University, Mangalore, Karnataka, comprising A.B. Shetty Memorial Institute of Dental Sciences, Deralakatte, Mangalore, shall be deemed to be a University for the purposes of the aforesaid Act.

Sd/  
**(Sunil Kumar)**  
**Joint Secretary to the Government of India**

(True Extract of the Notification)







**University Grants Commission  
Bahadurshah Zafar Marg  
New Delhi - 110002**

No. F.26-5/2008(CPP-1)

Dated: 24th March, 2009

**OFFICE MEMORANDUM**

1. Whereas the Government of India, Ministry of Human Resource Development, Department of Higher Education vide Notification No. F.9-13/2007-U.3(A) dated 4th June, 2008 declared Nitte University, Mangalore, Karnataka comprising A.B. Shetty Memorial Institute of Dental Sciences, Deralakatte, Mangalore as Deemed to be University under Section 3 of UGC Act, 1956.
2. And whereas now, the University Grants Commission, on the recommendation of an Expert Committee constituted by the Chairman, UGC has agreed for bringing (i) K.S. Hegde Medical Academy, Deralakatte, Mangalore, (ii) Nitte Usha Institute of Nursing Sciences, Deralakatte, Mangalore, (iii) Nitte Gulabi Shetty Memorial Institute of Pharmaceutical Sciences, Deralakatte, Mangalore, (iv) Nitte Institute of Physiotherapy, Deralakatte, Mangalore under the ambit of Nitte University, Deralakatte, Mangalore.

Sd/  
**(K.P. Singh)**  
**Joint Secretary**  
**University Grants Commission**

(True Extract of the Notification)



# Nitte University



(Deemed University under Section 3 of UGC Act 1956)  
Placed under Category 'A' by MHRD, Govt. of India  
Accredited with 'A' Grade by NAAC

University Enclave, Medical Sciences Complex, Deralakatte, Mangalore – 575 018

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NU/REG/53/AC10/2011/2 69/A

Date: 13-06-2011

## **NOTIFICATION**

### **Sub: The Regulations scheme and syllabi for MD/MS Program**

In exercise of the powers conferred under Rule No.R.8 of the MoA, the Academic Council in its 10<sup>th</sup> meeting held on 13-06-2011 under the agenda item no. AC/3-10/11 has been pleased to approve the curriculum and regulation for MD/MS course in K.S. Hegde Medical Academy.

<b>Sl.No</b>	<b>Specialty</b>
1	MD in Anatomy
2	MD in Biochemistry
3	MD in Physiology
4	MD in Microbiology
5	MD in Pharmacology
6	MD in Community Medicine
7	MD in Psychiatry

The Curriculum and Regulation shall come into force from the academic year 2011-12.

Sd/  
(H.V. SudhakerNayak)  
Registrar, Nitte Deemed to be University



# Nitte University



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Ref: NU/REG/AC-KSHEMA/2016-17/983

Date: 31-03-2017

## NOTIFICATION

### **Sub: Modified Regulations and Post Graduate Degree Course Curriculum of all clinical and Non-Clinical specialties (MD/MS)**

In exercise of the powers conferred under Rule No.R.9 of the MoA, the Academic Council in its 31<sup>st</sup> meeting held on 14-03-2017 under the agenda item no. AC/3(b)-31/17 has approved the Modified Regulations and Post Graduate Degree Course Curriculum of all clinical and Non-Clinical specialties (MD/MS).

Sl.No	Specialty
1	MD in Anatomy
2	MD in Biochemistry
3	MD in Physiology
4	MD in Forensic Medicine
5	MD in Microbiology
6	MD in Pathology
7	MD in Pharmacology
8	MD in Anaesthesiology
9	MD in Community Medicine
10	MD in Dermatology, Venereology and Leprosy
11	MD in General Medicine
12	MD in Paediatrics
13	MD in Psychiatry
14	MD in Radiodiagnosis
15	MS in General Surgery
16	MS in Obstetrics and Gynaecology
17	MS in Ophthalmology
18	MS in Orthopaedics
19	MS in Otorhinolaryngology (ENT)

Sd/  
(M.S. Moodithaya)  
Registrar, Nitte University





(Deemed to be University under section 3 of UGC Act 1956)  
Placed under Category 'A' by MHRD, Govt. of India  
Accredited as 'A' Grade University by NAAC  
Mangaluru, Karnataka, India

## **Regulations and Curriculum (Modified) for Postgraduate Degree Courses in Medical Sciences (MD/MS) (Amended upto March 2017)**

[(As per the Medical Council of India Postgraduate Medical Education Regulations, 2000  
(Amended upto February, 2016)]

### **Pre-Clinical, Para-Clinical and Clinical Subjects**

#### **Chapter I**

##### **Preamble:**

K.S. Hegde Medical Academy imparting education and training in medical sciences since 1999, started postgraduate degree courses in medical sciences (MD/MS) specialities in 2006, in order to carry out quality research and prepare specialists teachers in medical sciences. Consequent to becoming a constituent college of Nitte (Deemed to be University), in 2009-10, the new regulations for the postgraduate degree courses were formulated as under:

##### **1. Introduction:**

- 1.1. These regulations shall be called 'Nitte (Deemed to be University) Regulations for Postgraduate Degree Courses in Medical Sciences (MD/MS)' and govern the policies and procedures including selection, admission, imparting of instructions, conduct of examinations, evaluation and certification of candidate's performance and all amendments there to, leading to the award of MD/MS degree. The regulations has come into effect from the academic year 2017 - 18.
- 1.2. This set of regulations shall be binding on all the candidates undergoing the said degree programs.
- 1.3. These regulations are in conformance to the Medical Council of India Postgraduate Medical Education Regulations, 2000 (Amended upto February, 2016). These regulations may be modified from time to time as mandated by the statutes of the University and the Medical Council of India (MCI). These provisions shall be applicable to any new specialities that may be introduced from time to time.

- 1.4. This set of regulations may evolve and get refined or updated or amended or modified or changed through appropriate approvals from the Academic Council and the BoM from time to time and shall be binding on all parties concerned including the candidates, faculty, staff, departments, and authorities of the institution.
- 1.5. All disputes arising from this set of regulations shall be addressed to the BoM. The decision of the BoM is final and binding on all parties concerned. Further, any legal disputes arising out of this set of regulations shall be limited to jurisdiction of Courts of Mangalore only.

## 2. **Definitions:**

Unless the context otherwise requires:

- *BoM* means Board of Management of Nitte (Deemed to be University)
- *BoS* means Board of Studies in Medical Sciences (UG and PG) Pre-clinical, Paraclinical, Clinical, as the case may be
- *Constituent College* means any institution under the ambit of Nitte (Deemed to be University)
- *He* includes both genders he and she; similarly his and/or him, himself includes her, herself as well in all cases
- *Head of the Institution* means the Dean of the College / Institution
- *Institution/College* means K.S. Hegde Medical Academy
- *MCI* means Medical Council of India
- *Regulations* means this set of academic regulations
- *Regulatory Authority* means Authority appointed/constituted by the Central/ State Government/s and statutory bodies to regulate medical education
- *Teaching Hospital* means the Hospital attached to the K.S. Hegde Medical Academy or any other Hospital owned by, or under the management of Nitte (Deemed to be University)
- *University* means Nitte (Deemed to be University)

## 3. **Branches of Study:**

The following courses of study may be pursued

- 3.1 **MD (Doctor of Medicine)**
  - 3.1.1 Anatomy
  - 3.1.2 Biochemistry
  - 3.1.3 Physiology
  - 3.1.4 Forensic Medicine



- 3.1.5 Microbiology
- 3.1.6 Pathology
- 3.1.7 Pharmacology
- 3.1.8 Anaesthesiology
- 3.1.9 Community Medicine
- 3.1.10 Dermatology, Venereology and Leprosy
- 3.1.11 General Medicine
- 3.1.12 Paediatrics
- 3.1.13 Psychiatry
- 3.1.14 Radiodiagnosis

and such other subjects that shall be introduced by the Institution from time to time with due permission from the MCI.

#### 3.2 **MS (Master of Surgery):**

- 3.2.1. General Surgery
- 3.2.2. Obstetrics and Gynaecology
- 3.2.3. Ophthalmology
- 3.2.4. Orthopaedics
- 3.2.5. Otorhinolaryngology (ENT)

and such other specialties that shall be introduced by the Institution from time to time, with due permission from the MCI.

#### 4. **Duration of the Course:**

The duration of post graduate degree courses in medical sciences (MD/MS) shall be of three academic years, consisting of six terms. Each academic term shall be of six months duration.

#### 5. **Eligibility for Admissions:**

A candidate who has passed MBBS examination from a medical college recognized by the MCI and has completed one year compulsory rotatory internship in a teaching institution recognized by the MCI, and has obtained permanent registration of any state medical council shall be eligible for admission to MD/MS degree course.

The candidate seeking admission will have to secure an eligibility certificate from Nitte (Deemed to be University) by making an application along with the following documents and the prescribed fee:

- a. MBBS pass/degree certificate
- b. Copies of marks cards of all the university examinations
- c. Attempt certificate issued by the Principal of the college

- d. Internship completion certificate
- e. Certificate regarding the recognition of the last studied medical college by the MCI, issued by Dean/Principal of that college
- f. In case internship was done in a non teaching hospital, a certificate of the MCI that the hospital has been recognized for internship
- g. Registration Certificate of any state medical council
- h. Proof of SC/ST as the case may be
- i. Proof of NEET rank

**Note:**

1. A candidate possessing PG Diploma of 2 year duration and duly recognized by MCI is eligible for admission to MD/MS course in the same speciality. The duration of the course for such candidates shall be two years.
2. Foreign nationals and candidates qualified from a foreign university should obtain the temporary registration and permission from the MCI prior to the admission to the MD/MS Program.

**6. Selection of Eligible Candidates:**

Selection to the post graduate degree courses in medical sciences (MD/MS) shall be based on the basis of merit obtained in the National Entrance and Eligibility Test (NEET) conducted by the central government or its authorized agency.

**7. Withdrawal -Temporary and Permanent:****7.1. Temporary:**

- 7.1.1. A candidate who has been admitted to the course may be permitted to withdraw temporarily for a period of six months or more up to one year on the grounds of prolonged illness, grave calamity in the family etc, provided:
  - a. He applies stating the reason for withdrawal with supporting documents and endorsement by parent/guardian;
  - b. The Institution is satisfied that without counting the period of withdrawal the candidate is likely to complete his requirement of the degree within maximum time specified;
  - c. There are no outstanding dues or demands with the Department, library, hostel, Institution etc;
- 7.1.2. The tuition fee for the subsequent year may be collected in advance based on the severity of the case before giving approval for any such temporary withdrawal;
- 7.1.3. Scholarship holders are bound by the appropriate rules applicable;
- 7.1.4. The decision of the Institution/University regarding withdrawal of a

candidate is final and binding.

**7.2. Permanent withdrawal:**

- 7.2.1. A candidate who withdraws admission before the closing date of admission is eligible for refund of fees paid as per rules of the University;
- 7.2.2. Once the admission for the year is closed, and if a candidate wants to leave the Institution, he will be permitted to do so and take the Transfer Certificate from the Institution, after remitting all the tuition fees for the remaining years;
- 7.2.3. Those candidates who have received any scholarship/stipend/other forms of financial assistance from the Institution shall repay all such amounts in addition to those mentioned in the clause above;
- 7.2.4. The decision of the Institution/University regarding withdrawal of a candidate is final and binding.

**8. Migration:**

Under no circumstance, migration/transfer of a candidate undergoing a post graduate degree course shall be permitted.

**9. Conduct and discipline:**

- 9.1. Students shall conduct themselves within and outside the premises and the campus of the institution in a manner befitting a student of a professional institution.
- 9.2. **As per the order of Honorable Supreme Court of India, ragging in any form is considered as a criminal offence and is banned. Any form of ragging will be severely dealt with.**
- 9.3. The following act of omission and/or commission shall constitute gross violation of the code of conduct and are liable to invoke disciplinary measures:
  - 9.3.1. Ragging as defined and described by the Honorable Supreme Court of India /Government.
  - 9.3.2. Lack of courtesy and decorum, indecent behavior anywhere within or outside the campus.
  - 9.3.3. Willful damage or stealthy removal of any property/belongings of the institution/hostel or of fellow students/citizens.
  - 9.3.4. Possession, consumption or distribution of alcoholic drinks or any kind of drugs of abuse.
  - 9.3.5. Mutilation or unauthorized possession of library books.

- 9.3.6. Noisy or unruly behavior, disturbing studies of fellow students.
- 9.3.7. Hacking of computer systems (such as entering into other person's domain without prior permission, manipulation and/or damage to the computer hardware or software or any other cyber crimes etc.)
- 9.3.8. Plagiarism of any nature.
- 9.3.9. Any other act of gross indiscipline as decided by the institution from time to time.
- 9.4. Commensurate with the gravity of offence, the punishment may be: reprimand, fine, expulsion from the hostel, debarment from an examination, disallowing the use of certain facilities of the institution, rustication for a specific period or even outright expulsion from the institution, or even handing over the case to appropriate law enforcement authorities or the judiciary, as required by the circumstances.
- 9.5. For any offence committed in (i) a hostel (ii) a department or in a classroom and (iii) elsewhere, the Chief Warden, the Head of the Department and the Head of the Institution, respectively, shall have the authority to reprimand or penalize the student.
- 9.6. All cases involving punishment other than reprimand shall be reported to the Head of the Institution.
- 9.7. Cases of adoption of unfair means and/or any malpractice in an examination shall be reported to the Controller of Examinations for taking appropriate action.

## **10. Graduation Requirements:**

A student shall be declared eligible for the award of the degree if he has:

- Fulfilled all the degree requirements, including passing the required examination;
- No dues to the University, institution, departments, hostels, library, etc; and
- No disciplinary action pending against him.

The award of the degree must be recommended by the BoM.

## **11. Convocation:**

Degrees will be awarded in person to the students who have graduated during the preceding academic year. Degrees will be awarded *in absentia* to such students who are unable to attend the convocation. Students are required to apply for the convocation along with prescribed fee within the specified date and after having satisfactorily completed all degree requirements.

**12. Academic Appeals Board (AAB):**

There shall be an Academic Appeals Boards constituted by the University to receive grievances/ complaints in writing from the students regarding anomaly in award of marks due to perceived bias, victimization, erratic evaluation, etc. and to redress the complaints.

**Constitution:**

Head of the Institution	...	Chairperson
A Professor from a constituent college (Nominated by the Vice-Chancellor)	...	Member
Three faculty members (Nominated by the Vice-Chancellor)	...	Members
Controller of Examinations	...	Member Secretary

The AAB shall interact with the concerned examiner and the student separately, before taking a decision. The recommendation of the AAB shall be communicated to the Vice-Chancellor for further appropriate action.

**Note:**

- The Chairperson may co-opt and/or invite more members, with prior permission of Vice - Chancellor.
- Depending on the prevailing circumstances, the senior most member in the Board shall act as Chairperson instead of the appointed Chairperson.
- The quorum of each meeting shall be minimum of four members.

**13. Attendance and Monitoring Learning Progress:****13.1. Attendance:**

13.1.1. A student pursuing MD/MS course shall work in the concerned department of the institution for the entire period as a full time candidate. No student is permitted to run a clinic / laboratory / work in any laboratory / institution / hospital / nursing home etc., during the entire period of study. No student should join any other course of study or appear for any other degree examination conducted by this University or any other university in India or abroad during the period of registration.

13.1.2. Each year shall be taken as a unit for the purpose of calculating attendance.

- 13.1.3. A student shall attend symposia, seminars, conferences, journal review meetings, grand rounds, Clinico Pathological, Conferences, case presentations, clinics and lectures during each year as prescribed by the Department / Institution / University and not absent himself without a valid reason.
- 13.1.4. A student is required to attend a minimum of 80% of training during each academic year. Provided further, leave of any kind shall not be counted as part of academic term without prejudice to minimum 80% attendance of training period every year.
- 13.1.5. Any student who fails to complete the course in the manner stated above shall not be permitted to appear for the University examinations.

### **13.2 Teaching-Learning Activities:**

#### **13.2.1. Pre-Clinical and Para-Clinical Specialties:**

The teaching and training of the students shall be through lectures, seminars, journal clubs, group discussions, participation in laboratory and experimental work, and involvement in research studies in the concerned speciality and exposure to the 'applied aspects' of the subject relevant to the speciality.

#### **13.2.2. Clinical Specialties:**

The teaching and training of the students shall include graded responsibility in the management and treatment of patients entrusted to their care; participation in seminars, journal clubs, group discussions, clinical meetings, grand rounds, and clinico-pathological conferences; practical training in diagnosis and medical and surgical treatment and training in the basic medical sciences, as well as in allied clinical specialities.

### **13.3. Monitoring Learning Progress:**

- 13.3.1. A student shall maintain a work diary / log book and record his participation in the training program such as review of journal, seminars etc. conducted by the department / Institution.
- 13.3.2. The work diary shall be scrutinized and certified by the Guide, Head of the Department and Head of the Institution and presented during university practical / clinical examinations.
- 13.3.3. Special mention may be made of the presentations by the student as well as details of clinical or laboratory procedures, conducted by the student.

13.3.4. The concerned department shall conduct three examinations: One examination each at the end of the first and second year, and the third examination, two to three months before the University examination. These examinations shall include written papers, practical / clinical and viva-voce.

**13.4. Procedure for Defaulters:**

Each department shall have a Committee comprising of Head of the Department, three faculty members (maximum) and the respective Guide. A student whose progress is found to be unsatisfactory will be counseled by the Committee giving chances to improve. If the student continues to be defaulting, the Committee can recommend withholding the student from appearing for the University examinations.

**14. Dissertation / Thesis:**

**14.1 Preparation of Dissertation / Thesis:**

- 14.1.1. A student is required to carry out a study on a selected research project under the guidance of a recognized Guide. The results of such a study shall be submitted in the form of a dissertation/thesis.
- 14.1.2. The dissertation/thesis is aimed at training a postgraduate student in research methodology and techniques, medical ethics and medico – legal aspects. It includes identification of a problem, formulation of a hypothesis, review of literature, getting acquainted with recent advances, designing of a research study, collection of data, critical analysis, and comparison of results and drawing conclusions.
- 14.1.3. The dissertation/thesis should be written under the following headings in order:
  - a. Introduction
  - b. Aims and Objectives of the Study
  - c. Review of Literature
  - d. Materials and Methods
  - e. Results
  - f. Discussion
  - g. Summary and Conclusions
  - h. References
  - i. Tables
  - j. Annexures

- 14.1.4 The written text of dissertation/thesis shall be of not less than 50 pages and shall not exceed 200 pages excluding references, tables, questionnaires and other annexures. It should be neatly typed with double line spacing on one side of the paper (A4 size: 8.27” x 11.69”) and bound properly. Spiral binding should be avoided. A soft copy of the dissertation/thesis should also be submitted.
- 14.1.5. A Guide shall be a full time postgraduate teacher in the respective department of the college and recognized by MCI / Nitte (Deemed to be University) as a Guide for supervision of dissertation/thesis work. A Co-Guide can be opted wherever required with prior permission of the college and university. The Co-Guide should also be a postgraduate teacher, recognized by MCI / Nitte (Deemed to be University).
- 14.1.6. He shall submit the synopsis of the study to the University through the Guide, HoD and Head of the Institution. The synopsis shall be submitted within six months of commencement of the course or within the date notified by the University. The synopsis should be vetted by the Guide, Department and approved by the Institutional Ethics Committee before submission to the university.
- 14.1.7. Once the synopsis is approved and registered by the University, no change in the topic or Guide shall be permitted without the prior approval of the University.
- 14.1.8. In the event of the registered Guide leaving the Institution or in the event of the death of the Guide, the Guide may be changed with prior permission from the University.

#### **14.2.Submission and Acceptance of Dissertation/Thesis :**

- 14.2.1 The final dissertation/thesis in the prescribed format and certified by the Guide and Co-Guide (if any), Head of the Department and Head of the Institution should be submitted to the University six months before the University examinations or as per the date notified by the University..
- 14.2.2 A student is eligible to appear for the University theory, practical/ clinical, and viva-voce examinations only if his dissertation/thesis has been accepted by the University, after due evaluation, subject to satisfying other conditions mentioned below. (see 15.2.1)



**15. Examinations:****15.1. University Examinations:**

The University examination shall be held at the end of 3 academic years (six academic terms). An academic term shall mean six months training period. The examinations shall consist of dissertation/thesis, theory papers, practical/clinical and viva-voce examinations. The University shall conduct two examinations in an academic year at an interval of not less than four months and not more than six months between the two examinations.

**15.2. Scheme of Examinations:**

The examination shall consist of dissertation/thesis, written paper (theory), practical / clinical and viva-voce examinations.

**15.2.1 Eligibility to Appear for University Examinations:**

A student who fulfills all of the following conditions shall be permitted to appear for the University examinations.

- A minimum 80% attendance in each academic year;
- Satisfactory completion of the requirements of the course certified by Head of the Department and Head of the Institution;
- Acceptance of the thesis/ dissertation by the University;
- Presented one poster, read one paper at a national/state conference and presented one research paper which should have been published/accepted for publication/sent for publication during the period of his postgraduate studies; and
- Fulfills any other requirement that may be prescribed by the University from time to time.

15.2.2 A student whose dissertation/thesis has been accepted by the examiners, but who is declared to have failed in the University examination will be permitted to reappear for the subsequent examination without having to prepare a new dissertation/ thesis.

15.2.3 In case the dissertation / thesis of student is rejected, the authorities shall give reasons thereof and suggestion for the improvement of the same and the dissertation / thesis thus improved will have to be re-submitted to the University for evaluation and be accepted before appearing for the university examination.

**15.2.4 Theory Papers:**

- There shall be four theory papers each of three hours duration and each paper carrying 100 marks.
- Paper I, II III and IV shall consist of two long essay questions of 20 marks each and six short essay questions of 10 marks each.

**Note:**

Questions on recent advances may be asked in any or all the papers.

The distribution of topics in each paper is given under the respective speciality

**15.2.5 Practical Examination (Pre-Clinical and Para- Clinical specialities):**

The total marks for practical examination shall be 200 marks. Practical examination in subjects in basic medical sciences specialities shall be conducted to test the knowledge and competence of the student for making valid and relevant observations based on the experimental/ laboratory studies and his ability to perform such studies as are relevant to his speciality.

**15.2.6 Clinical Examination (Clinical specialities):**

The total marks for clinical examination shall be 200 marks. Clinical examination in clinical specialities shall be conducted to test the knowledge and competence of the student for undertaking independent work as a specialist/teacher, for which students shall examine a minimum of one long case and two short cases.

**15.2.7 Viva -Voce Examination:**

Viva -Voce examination shall aim at assessing depth of knowledge, logical reasoning, confidence and oral communication skills. The total marks shall be 100 marks and the division of marks shall be as under:

Examination of all components of the syllabus:	80 marks
Pedagogy:	20 marks

**16. Criteria for Pass:**

To pass in the University examinations, a student shall appear for all theory papers scoring a minimum of 40% in each paper and secure a minimum of 50% of total marks allotted for theory subjects (i.e. 200 marks out of 400) in aggregate and 50% marks allotted in practical/ clinical and viva voce put together (minimum of 150 marks out of 300 marks) in aggregate.

16.1.1. A student securing less than 50% marks shall be declared to have failed in the examination. The reasons for failing a student shall be documented in the case sheet and signed by all Examiners. Failed students may reappear in any subsequent examination as notified by the University.

**17. Declaration of Class:**

Class will be awarded only to those students who pass the entire examination in the first attempt and minimum duration (two years / three years, as the case may be) and the class shall be awarded as follows:

- 75% and above: Passed with Distinction
- 50% and above but below 75%: Pass class

A student who passes the examinations in more than one attempt shall be declared as 'Pass' irrespective of the percentage of marks secured.

**18. Supplementary Examination:**

Supplementary examination shall be conducted by the University for the benefit of unsuccessful students which will be held within six months from the date of announcement of results.

A student detained for lack of attendance will be barred from appearing for the supplementary examinations unless he has fulfilled the requirement of attendance.

**19. Award of Merit Certificates:**

Merit Certificate is awarded only if a student passes with 75% and above in the first attempt.

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## Chapter II

# GOALS AND GENERAL OBJECTIVES OF POSTGRADUATE MEDICAL EDUCATION COURSE

### 1. Goal

The goal of postgraduate medical education shall be to produce competent specialists and/or medical teachers:

- i. who shall recognize the health needs of the community, and carry out professional obligations ethically and in keeping with the objectives of the national health policy;
- ii. who shall have mastered most of the competencies, pertaining to the speciality, that are required to be practiced at the secondary and the tertiary levels of the health care delivery system;
- iii. who shall be aware of the contemporary advance and developments in the discipline concerned;
- iv. who shall have acquired a spirit of scientific inquiry and is oriented to the principles of research methodology and epidemiology; and
- v. who shall have acquired the basic skills in teaching of the medical and paramedical professionals.

### 2. General Objectives of Post-Graduate Training:

At the end of the postgraduate training in the discipline concerned the student shall be able to:

- i. Recognize the importance to the concerned specialty in the context of the health needs of the community and the national priorities in the health sector;
- ii. Practice the specialty concerned ethically and in step with the principles of primary health care;
- iii. Demonstrate sufficient understanding of the basic sciences relevant to the concerned specialty;
- iv. Identify social, economic, environmental, biological and emotional determinants of health in a given case, and take them into account while planning therapeutic, rehabilitative, preventive and promotive measures strategies;
- v. Diagnose and manage majority of the conditions in the speciality concerned on the basis of clinical assessment, and appropriately selected and conducted investigations;
- vi. Plan and advise measures for the prevention and rehabilitation of patients suffering from disease and disability related to the speciality;

- vi. Demonstrate skills in documentation of individual case details as well as morbidity and mortality rate relevant to the assigned situation;
- vii. Demonstrate empathy and humane approach towards patients and their families and exhibit interpersonal behaviour in accordance with the societal norms and expectations;
- viii. Play the assigned role in the implementation of national health programs effectively and responsibly;
- ix. Organize and supervise the chosen/assigned health care services demonstrating adequate managerial skills in the clinic/hospital or the field situation;
- x. Develop skills as a self-directed learner, recognize continuing education needs and select and use appropriate learning resources;
- xi. Demonstrate competence in basic concepts of research methodology and epidemiology, and be able to critically analyze relevant published research literature;
- xii. Develop skills in using educational methods and techniques as applicable to the teaching of medical/nursing students, general physicians and paramedical health workers; and
- xiii. Function as an effective leader of a health team engaged in health care, research or training;

### **3. Components of the Postgraduate Curriculum**

The major components of the postgraduate curriculum shall be:

- Theoretical knowledge
- Practical and clinical skills
- Writing dissertation/research articles
- Attitudes including communication skills
- Training in research methodology, medical ethics and medico-legal aspects

*[Source: The Medical Council of India Postgraduate Medical Education Regulations, 2000 (Amended upto February, 2016)]*

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## Chapter III

### Curriculum for

### MD ANATOMY

***Programme Outcomes:***

***At the end of the program, graduates will be able to...***

1. Describe Gross Anatomy of entire body including limbs, thorax, abdomen, pelvis, head and neck with brain.
2. Describe gametogenesis, fertilization, implantation, sequential development of organs and systems.
3. Describe microscopic structure of various tissues and organs.
4. Describe the structure, classification and syndromes related to human chromosomes. Describe about reproduction genetics, assisted reproduction, genetic counselling.
5. Identify and refer patients who may require specialized or advanced tertiary care
6. Describe knowledge about recent advances in medical sciences. Application of stem cells.
7. Demonstrate surface marking of the important structures of the Human body.
8. Identification and to know the characteristics features of human bones.
9. Demonstrate different methods of teaching learning and make presentation of the subject topics and research outputs.
10. Identify different cells and relevant structure in dissected cadavers.
11. Demonstrate embalming, tissue preparation, staining and museum preparation.

**Goal:** The postgraduate course (MD Anatomy) should enable a medical graduate to become a competent specialist, acquire knowledge and skills in educational technology for teaching medical and health sciences and conduct research in bio - medical sciences.

**Objectives:** At the end of the course, the postgraduates in Anatomy shall be able to:

1. Demonstrate comprehensive knowledge and understanding of gross and microscopic structure of human body and skills to demonstrate special dissection and histological and histo chemical techniques.
2. Comprehend normal disposition, interrelationships, functional and applied anatomy of the various structures of the body.

3. Describe development of human body to provide an anatomical basis for understanding the structure and correlate with functions both in health and in disease presentations.
4. Demonstrate knowledge of basic and systemic embryology including genetic inheritance and sequential developments of organs and systems.
5. Recognize critical stages of development and the effects of common teratogens, genetic mutations and environmental hazards.
6. Explain development basis of major variations and abnormalities.
7. Aware of contemporary advances and developments in Anatomy and related bio-medical field.
8. Demonstrate competence in basic concepts of research and acquire a spirit of enquiry in research.
9. Critically evaluate published research literature.
10. Recognize continuing educational needs and develop skills as a self directed learner.
11. Select and use appropriate learning resources and teaching techniques as applicable for teaching and evaluation of medical and allied health science students.
12. Carry out professional obligations ethically and in keeping with objectives of National Health Policy.
13. Function as an effective member in health care, research and training.
14. Exhibit interpersonal behavior in accordance with social normal expectations.
15. Acquire knowledge relating to latest non-invasive techniques like X - ray C.T. Scan, M.R.I., Ultrasound and their interpretation in health and disease conditions.
16. Learning the methodology, techniques of embalming, preservation of cadavers and museum techniques.
17. Knowledge and interpretation of Anatomy Act as in existence.
18. Knowledge of the important body structures of different species of animals in order to understand the adaptive changes they have undergone in the course of evolution under comparative anatomy.

## **SYLLABUS**

### **Theory**

- a. General anatomy: History of Medicine and History of Anatomy, Elements of Anatomy
- b. Gross Anatomy: Gross Human Anatomy including Sectional Anatomy,



- Surface Anatomy, Neuro anatomy.
- c. Developmental Anatomy: General Embryology and systemic Embryology including Teratology, human Genetics,
  - d. Microscopic anatomy: General, Systemic histology, histological techniques and principles of microscopy.
  - e. Clinical Anatomy: Surgical anatomy and recent advances. Medicolegal aspects, knowledge of Anatomy Act, Medical Ethics.
  - f. Research methodology: Radiology and Principles of newer imaging techniques, Interpretation of CT Scan, Sonography and MRI.
  - g. Comparative Anatomy.
  - h. Principles of Physical Anthropology.
  - i. Museum techniques including Plastination and Embalming

**Practicals****Gross Anatomy:**

- a. Dissection of the entire human cadaver.
- b. Embalming and maintaining the record of embalming work done.
- c. Preparation and mounting at least 10 museum specimens.

**Histology:**

- a. Collecting tissues for preparation, fixing, block making and section cutting.
- b. Using microtomes for preparation of general and systemic slides.
- c. Preparation of Haematoxylin and Eosin stains.
- d. Have knowledge of special staining techniques like Silver Nitrate, PAS Staining, Osmium Tetroxide, Van Gieson and any other.
- e. Taking serial sections of Chick embryo and mounting it after staining with Haematoxylin and Eosin.
- f. Have knowledge of light microscope and electron microscope.
- g. Have knowledge of detailed microscopic study of all the tissues (General and Systemic slides).
- h. Use use of binocular microscope / digital camera in microscopy.

**Method of Training:**

- a. Group discussions, Symposia/Seminars and Journal club.
- b. A record showing the participation of the students in group discussion Symposia/Seminars and Journal club should be maintained by the students.
- c. Lectures/lecture demonstrations in select topics in Anatomy and as well as in allied disciplines.

- d. The candidate shall attend the undergraduate theory and practical classes regularly in first year.

### **Module on Gender Equity**

#### **Specific learning outcomes:**

At the end of each unit students will be able to

1. Recognize the causes for the current status of women in our society.
2. Discuss the need for women empowerment and related social issues.
3. Summarize the status of women in primary, secondary and higher education in India.
4. Identify the problems faced by women in various forms of occupation
5. Outline the laws governing women rights in India.

#### **SYLLABUS: (10 hours)**

- Status of Women: Demographic profile of women related statistics
- Women empowerment: concept, need, Issues related to women, programs for girl child, violence against women, laws protecting women rights, case profile studies.
- Importance of women education: School drop-out rate, causes, prevention and steps taken. The access to higher education. Case profile studies.
- Women and work: Problems faced by working women, Maternity leave, POCSO act. Case profile study of a working woman.

#### **Suggested Teaching-Learning methods**

- Lectures / group discussions
- Self-directed learning and Assignments

### **Module on Human Health and Environment**

#### **Specific learning outcomes:**

At the end of each unit students will be able to

1. Describe the principles of environmental science
2. Define the structure, function and features of ecosystem.
3. Summarize the importance of healthy air, water and soil.
4. Identify the types of pollution, sources, causes and impact on human health.
5. List common aeroallergens and pollution related diseases
6. Describe biological, chemical and physical hazards as determinants of health and disease in humans.

**SYLLABUS (10 hours)**

**Introduction:** Health and Environment, atmosphere, hydrosphere, lithosphere and biosphere.

**Ecosystem:** Structure, functions and its features. Weather and climate change: Global warming and greenhouse effect.

**Pollution:** Classification of pollution, its sources, cause and their impacts. Types of pollutants and its fate: Eutrophication. Water and soil- types and sources; sewage and waste water treatment and recycling; Noise pollution and its impact on human health.

**Environmental hazards:** Biological, chemical and physical hazard. Toxic chemicals in the environment: air, water and soil

**Clean air:** Pesticides and carcinogens in the air, Microflora of atmosphere, Identification of aeroallergens, Air pollution related diseases and allergies.

**Environmental Ethics and Global imperatives:** Legal/environmental policy and different control measures.

**Suggested Teaching-Learning methods**

- Lectures / group discussions
- Self-directed learning and Assignments

**Rotation Posting:**

- a. After the submission of the synopsis of the dissertation, selective posting shall be made to related clinical or para clinical department for a period of two months.
- b. The students shall also be posted to Orthopaedics, Surgery and Radio diagnosis departments for two weeks each.

**Training Schedule :****1 year:**

- 1 to 3 months:** Search and identification of topic for dissertation in consultation with guide and use of library, satellite search etc., and preparation of synopsis.
- 4 to 6 months:** Study of methodology of experiments, study of instruments for experimentation. Submission of synopsis to the University for registration.
- 7 to 10 months:** Literature survey, preparation of reference cards, collection of relevant literature and journal work.

Apart from this the candidate shall attend all the undergraduate theory, practicals classes, student tutorials, and other teaching activities regularly. A diary showing each days work has to be maintained by the candidate, which shall be submitted to the Head of the Department and duly signed.

**II year and III year:** The student shall do all the experiments mentioned in the course content on weekly basis and also continue the experimental work of the dissertation if any.  
He shall participate in all seminars, journal clubs and file the seminar papers to make a book.  
They should attend at least 2 conferences and 3 CME programmes. They should undergo 15 days teachers training programme.  
They should also maintain daily log book of all the academic activities of 3 years.

**Scheme of Examination (Summative Assessment):**

M.D. (Anatomy) degree examination shall be held at the end of three academic years and shall consist of dissertation/thesis, written papers (Theory), clinical and viva voce.

**Note:** Satisfying all the pre requisites as indicated in Chapter 1 is a must to appear for the University examination. ( See 15.2.1 in Chapter I)

**Theory:**

**Total 400 Marks**

Written examination shall consist of four question papers each of 100 marks and three hours duration. Each paper shall consist of two long questions carrying 20 marks each and 6 short essay questions each carrying 10 marks.

The distribution of topics for each paper shall be as follows:

<b>Paper I :</b>	Gross Human Anatomy General Anatomy History of Anatomy	100 Marks
<b>Paper II :</b>	Embryology Comparative Anatomy Principles of Physical Anthropology	100 Marks
<b>Paper III :</b>	Histology - General and Systemic Histological museum and embalming techniques. Human Genetics	100 Marks

<b>Paper IV :</b> Applied Anatomy	100 Marks
Neuroanatomy	
Cross sectional Anatomy and Newer Imaging Techniques.	

<b>Total</b>	<b>400 Marks</b>
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**Note:**

- Strict division of topics may not be possible and some overlapping is inevitable.
- Questions on recent advances may be asked in any or all the papers.

**Practicals**
**Total 200 Marks**
**Gross Anatomy - 100 Marks and Histology - 100 Marks.**

**Gross Anatomy :** To dissect the human cadaver in 3 hours and display for discussion, the allotted dissection exercise:

Surface Anatomy	10 Marks
Dissection	40 Marks
Discussion	50 Marks

<b>Total</b>	<b>100 Marks</b>
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**Histology:**

Identification and discussion of 10 stained sections which includes Neuroanatomy Embryology and Genetics	}	10x4 Marks each - 40 Marks
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Preparation of paraffin block	10 Marks		
Taking serial section from blocks provided	10 Marks	}	40 Marks
Staining of the given section	20 Marks	}	
Discussion on Histology and Embryology including techniques			20 Marks

<b>Total</b>	<b>100 Marks</b>
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**Viva – Voce and Pedagogy**
**Total 100 Marks**

**Viva – Voce:** The Viva-Voce is aimed at testing the student’s comprehension, analytical approach, expression and interpretation of data. This includes specimens, skiagrams, including newer imaging techniques, bones and models. The Viva-Voce also includes all components of the syllabus, and discussion on dissertation. 80 Marks

**Pedagogy:** Demonstration of teaching skills / techniques 20 Marks

**Total** **100 Marks**

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Theory	Practical	Viva-voce	Total
400 Marks	200 Marks	100 Marks	700 Marks

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**Recommended Books and Journals (Latest Editions)****Gross Anatomy**

1. Williams Peter. L. Gray's, Anatomy - Churchill Living Stone.
2. Mc Minn R.M.H. Last's, Anatomy - ELBS.
3. Basmajain V. John and Slonecker E. Charles. Grants Method of Anatomy, Williams and Wilkins.
4. Hollinshed. W. Henry, Anatomy for Surgeon's - Harper and Raw Publishers.
5. Duplessis and Gagdecker Lee Megregor's Synopsis of Surgical Anatomy - K.M. Varghese Company.
6. Snell. S. Richard, Clinical Anatomy for Medical Students - Little Brown and Company.
7. Grant Boileao. J.C. An Atlas of Anatomy - Little Brown and Company.
8. Graggess hall E.C.B., Anatomy as a basis for clinical medicine - Williams and Williams.
9. Mc minn M.H. Robert, Mc Minn's Functional and Clinical Anatomy - Mosbu Publications.
10. Mc Minn R.M.H. Last's Anatomy Regional and Applied - Churchill Living Stone.
11. A.K. Datta, Text book of Anatomy Vol. I, II and III - Current Books International. (Essential of Human Anatomy 4th RP)
12. Legross Clerk. Tissues of the Body - Oxford University Press.
13. Keith and Moore. Clinically Oriented Anatomy - Wilkins.
14. Swamy I.B. Human Anatomy, Vol. I, II and III.
15. Thompson, General Surgical Anatomy and Examination – Elsevier.
16. Berkovitz, Oral Anatomy, Histology and Embryology - Elsevier.

**Histology**

1. Cormack. H. David, Ham's Text Book of Histology - J.B. Lippincott Company.
2. Copenhaver M. Wilfred Etal, Bailey's Text Book of Histology, William and Wilkins.
3. Difiore. S.H. Mariano, Atlas of human Histology - Lea Febiger Publishers.
4. Junqueira. C. Luis Etal, Basic Histology - Large Medical Publication.
5. Drury R.A.B., Wallington E.A. Carlton's, Histological Technique - Oxford University, Preces.
6. Cullings, Histological Technique - Butterwoeths.
7. John D Bancroft, Manual of Histological Technique - Churchill Livingstone.

8. Michael H ross. Histology - A Text and Atlas - Williams and Wilkins.
9. Bloom and Fawcet. Text Book of Histology.

**Embryology**

1. Hamilton W.J. and Mossman H.W. Human Embryology - Williams and Wilkins Company.
2. Sadler T.W. Langman's Medical Embryology - Williams and Wilkins Company.
3. A.K. Datta, Essentials of Human Anatomy, Human Embryology – Current Books International.
4. Moore Persaud, The Developing human - W.B. Saunders Company.
5. Larsen, Human Embryology - Churchil Livingstone.
6. Arey - Developmental Anatomy.
7. John Lankman, Embryology for Medical Students.

**Neuro Anatomy**

1. Everett N.B. Functional Neuroanatomy - Lee and Febigger.
2. Chusid G. Joseph, Correlative Neuroanatomy and Functional Neurology - Large Medical Publication.
3. A.K. Datta (Neuroanatomy), Essentials of Human Anatomy - Current Books International.
4. Snell S. Richard, Clinical Neuroanatomy for Medical Students, - Lippincotl - Raven.
5. Parent Andre, Carpenter's Neuroanatomy - Williams and Wilkins.
6. Indeirbir Singh, Neuroanatomy - Jaypee Brothers Medical Publications.
7. Fitzgerald, Clinical Neuroanatomy and Neuroscience - Elsevier.

**Human Genetics / Medical Genetics**

1. Robert F. Mueller, Emery's Elements of Medical Genetics - Churchill Livingstone Nora and Frazer, Medical Genetics Principles - 1974 Lee and Gebiger, Philladelphia.
2. Friedman, NMS Genetics
3. Alfred G. Kudson Jr. Genetics and Disease - Mc. Graw Hill Book Company N.Y.
4. Thomas D. Gelehrtar. Principles of Medical Genetics - Williams and Wilkins.
5. Charma, Curt Stern Principies of Human Genetics.



**Comparative Anatomy**

1. Banks Histology and Comparative Organology - A Text and Atlas
2. Wolstenhome, Taste and Smell in Vertebrates
3. Embryogenesis in Mammals CIBA Foundation
4. George C. Kent, Comparative Anatomy of the Vertebrates Graw Hill Book Company.
5. Romer, Vertebrate Body - V.B. Saunders Company.

**Physical Anthropology**

1. Harrison. Human Biology an Introduction to Human, Evolution and Growth.
2. Poirie, Fossil Man.

**Embalming Techniques**

1. Jayavelu T. Embalming Techniques, Churchil Livingston.
2. Ansari M.C. Embalming.

**Museum Techniques**

1. Tompsett RH Anatomical Techniques.
2. Edwards JJ, Medical Museum Techniques, Oxford University Press.

**Additional Reading**

1. Compendium of recommendations of various committees on Health and Development (1943 - 1975). DGHS, 1985 Central Bureau of Health Intelligence, Directorate General of Health services, min. of Health and Family Welfare, Govt, of India, Nirman Bhawan, New Delhi.
2. National Health Police, Min. of Health and Family Welfare, Nirman Bhawan New Delhi.
3. Santosh Kumar, The elements of Research, writing and editing 1994, Dept. of Urology, JIPMER, Pondicherry.
4. Srinivasa D.K. etal, Medical Education Principles and Practice. National Teacher Training Centre, JIPMER, Pondicherry
5. Indian Council of Medical Research, "Policy Statement of Ethical considerations involved in Research on Human Subjects", I.C.M.R. New Delhi.
6. Code of medical Ethics framed under section 33 of the Indian Medical Council Act, 1956. Medical Council of India, Kotla Road, New Delhi.
7. Francis CM, Medical Ethics, JP Publications, Bangalore.
8. Indian National Science Academy, Guidelines for care and use of animals in

- Scientific Research. New Delhi.
9. Internal National Committee of Medical Journal Editors, Uniform requirements for manuscripts submitted to biomedical journals, N Engl J Med 1991; 424-8.
  10. Kirkwood B.R. Essentials of Medical Statistics, Oxford: Blackwell Scientific Publications.
  11. Mahajan B.K. methods in Bio Statistics for medical students, New Delhi, Jaypee Brothers Medical Publishers.
  12. Raveendran B Gitanjali, A Practical approach to PG dissertation, New Delhi, JP Publications.
  13. Arunachalam Kumar, Biomedical Writing, Nitte Deemed to be University.

### **Recommended Books for Module on Gender Equity**

1. Teacher, Law Gender Sensitivity and Discrimination Against Women. Retrieved from <https://www.google.co.in/?vref=1> Siddiqi, F.E. & Ranganathan, S. Handbook on Women and Human Rights: A guide for Social Activists. (Part-I). New Delhi: Kanishka Publishers.
2. Goel, S.L. Population Policy and Family Welfare. New Delhi: Deep and Deep Publications.
3. Carole Brugeille and Sylvie Cromer Promoting gender equity through text books- A methodical guide. Publ: United Nations Educational, Scientific and Cultural Organization (UNESCO), Paris

### **Recommended Books for Module on Human Health and Environment**

1. Text Book of Environmental Chemistry & Pollution Control, S. S. Dara and D. D. Mishra; S. Chand and Company Ltd, ISBN: 9788121908832.
2. Environmental Pollution: Health and Toxicology, S. V. S. Rana; Narosa Publishing House, ISBN: 9788173199141.
3. Environmental Chemistry: Pollution and Remedial Perspective, A. V. Salker; Narosa Publishing House, ISBN: 9788184875935.
4. Wastewater treatment: Concepts and Design Approach, G. L. Karia, and R.A. Christian; PHI Learning Pvt. Ltd, ISBN: 9788120347359.
5. Pollutants, Human Health and the Environment: A Risk Based Approach, J. A. Plant, N. Voulvoulis, K. V. Ragnarsdottir; Wiley-Blackwell, ISBN: 978-0-470-74261-7.
6. Environmental Science: A Global Concern, P. C. William and A. C. Mary; McGraw Hill Education, USA, ISBN: 978-9339221263.

7. Pollution: Causes, Effects and Control, R. M. Harrison; Royal Society of Chemistry, UK, ISBN: 0854046216

**Journals (Latest Edition)**

1. Journal of Anatomical Society of India.
2. Journal of Anatomy.
3. Acta Anatomica.
4. American Journal of Anatomy.
5. American Journal of Physical Anthropology.
6. Journal of Morphology, Embryology.
7. Anatomical Record.
8. American Journal of Medical Genetics.
9. Annual Review of Genetics.
10. Clinical Anatomy
11. Anatomical Sciences International
12. Annals of Anatomy
13. Journal of Genetics
14. National journal of clinical Anatomy
15. Indian journal of human genetics (IJHG)
16. International journal of Anatomy & Research

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## ANNEXURES

### Check List No. 1

### K S Hegde Medical Academy

A Constituent College of NITTE (Deemed to be University)

### Evaluation of Seminar Presentations

**Name of the Student:**
**Date:**
**Title of Topic :**

Sl. No.	Points to be Observed	Yes 2	To some extent 1	No 0
<b>1.</b>	<b>Content</b>			
	Stated learning objectives Discussed all key topics. Avoided irrelevant topics / unnecessary details were avoided			
<b>2.</b>	<b>Clarity of presentation</b>			
	Organized the content in a logical sequence Explained the concepts with appropriate examples and illustrations			
<b>3.</b>	<b>Evidence based presentation</b>			
	Cited relevant references to offer evidence / support to content			
<b>4.</b>	<b>Use of Audio-visual aids</b>			
	Used Audio-visual aids effectively			
<b>5.</b>	<b>Communication skills</b>			
	Sustained audience interest in topic Is able to answer questions confidently and to the point			
<b>6.</b>	<b>Time management</b>			
	Was able to complete presentation within stipulated time			
	<b>Total</b>			
<b>Overall Remark:</b>				

**Name and Signature of Faculty:** .....



**Check List No. 2**
**Evaluation of Journal Review Presentation**
**Name of Student:**
**Date:**
**Article citation:**
**How to use this form?**

Part 1: Assess whether the student has selected an appropriate paper for discussion  
 Part 2: Assess whether the student presents the key aspects of the paper clearly  
 Part 3: Assess whether the students reflects on the paper, identifies the strengths and weaknesses and offers a critical review  
 Part 4: Assess the presentation and communication skills

**Part 1: Selection of article**

	<i>Criterion</i>	<i>Score</i>
1.	Article chosen is from a journal indexed in PubMed/ Scopus / Web of Science (Yes = 1 point; No = 0 point)	
2.	Article chosen is relevant (Yes = 1 point; No = 0 point)	
	<b>Subtotal (Maximum 2)</b>	

**Part 2: Presentation of article**

**Assess and score the ability of the student to present each of the sections of the article accurately and clearly:**

**2 points** - Presented ALL of the key components of the section accurately and clearly

**1 point**- Presented MOST of the key components of the section accurately and clearly

**0 points** - Did NOT present the key components of the section accurately and clearly

	<i>Section</i>	<i>Score</i>
1.	<b><i>Introduction</i></b> <input type="checkbox"/> Rationale / Need for study <input type="checkbox"/> Research questions / objectives <input type="checkbox"/> Summary of relevant references	
2.	<b><i>Methodology</i></b> <input type="checkbox"/> Study design <input type="checkbox"/> Study setting <input type="checkbox"/> Study population <input type="checkbox"/> Study variables <input type="checkbox"/> Sampling methods, bias <input type="checkbox"/> Statistical methods <input type="checkbox"/> Ethical issues	
3.	<b><i>Results</i></b> <input type="checkbox"/> Summary of descriptive data <input type="checkbox"/> Key results related to each objective	
4.	<b><i>Discussion</i></b> <input type="checkbox"/> Explanation of key results <input type="checkbox"/> Comparison with existing literature <input type="checkbox"/> Implications of findings	
	<b><i>Subtotal (Maximum 8)</i></b>	

### **Part 3: Critical appraisal**

Assess and score the ability of the student to reflect upon and critique the following aspects of the article

2 points - Reflects and offers a logical, meaningful critique

1 point- Attempts to reflect / critique

0 points - No attempt at reflection / critique

	<b>Item to be critiqued</b>	<b>Score</b>
1.	Need for study, research questions and objectives	
2.	Appropriateness of study design	
3.	Appropriateness of study population, subject selection and randomization	
4.	Appropriateness of sampling / randomization / experimental / interventional methods	
5.	Appropriateness of data collection methods	
6.	Appropriateness of data analyses methods	
7.	Reporting of results including clarity of tables and graphs	
8.	Appropriateness of discussion of results, their interpretation and implications.	
9.	Comments on the relevance and quality of references cited	
10.	Comments on the scientific validity of the study as a whole	
11.	Comments on the generalizability of the findings	
12.	Comments on the relevance and usability of the findings - clinical / public health significance / conceptual impact	
	<b><i>Subtotal (Maximum 24)</i></b>	



**Part 4 – Presentation and communication skills**

	Assess the presentation and communication skills of the student 2 points = To a great extent; 1 point= To some extent; 0 points= No	Score
	<b>Criterion</b>	
1.	Ability to create and sustaining interest in paper (2 points = To a great extent; 1 point = To some extent; 0 points = No)	
2.	Ability to effectively use audio-visual aids (2 points = To a great extent; 1 point = To some extent; 0 points = No)	
3.	Ability to answer questions effectively in an unbiased manner (2 points = To a great extent; 1 point = To some extent; 0 points = No)	
	<i>(Subtotal maximum 6)</i>	
<b>Grand total (Maximum 40)</b>		

Overall assessment of level of critical appraisal skills of student

- Novice – is able to present some aspects of a scientific paper but with minimal / no critical reflection.
- Advanced beginner – Is able to present most aspects a scientific paper with adequate clarity and is able to critically reflect upon some aspects of the article.
- Competent - Is able to present a scientific paper accurately with clarity and is able to critically appraise the paper for its validity, generalizability and significance

**Remarks:**

**Name and Signature of Faculty:** .....



**Check List No. 3**

**KS Hegde Medical Academy**  
 A Constituent College of NITTE (Deemed to be University)  
**Evaluation of Teaching Skills**

**Name of the Student:**
**Date :**
**Lesson Title**

	Sl. No	Assessment criterion	Yes 2	To some extent 1	No 0
Set induction	1.	Generates interest in topic (set induction)			
	2.	States learning objectives			
Planning	3.	Has prepared a good lesson plan			
	4.	Content is appropriate and well organized			
	5.	Uses time effectively – completes lesson in specified duration			
Presentation	6.	Uses appropriate examples to illustrate concepts			
	7.	Uses non-verbal cues, eye-contact, interacts with students			
	8.	Uses voice effectively with appropriate modulation			
Learner participation	9.	Solicits / allows questions from students			
	10.	Asks questions			
	11.	Rewards pupil effort			
Use of AV aids	12.	Uses visual aids (board / slides) effectively			
Closure	13.	Closes the lesson well - summarizes and reinforces			
	14.	Facilitates beyond class learning – assignments etc.			
<b>Total</b>					
<b>Overall Remarks :</b>					

**Overall assessment of level of teaching skills:**

- Novice – is able to prepare a basic lesson plan with guidance and practice a few teaching skills, under guidance, in a protected setting (eg. in a microteaching session).
- Advanced beginner - is able to prepare a lesson plan and demonstrate many of the teaching skills, under guidance, in a protected setting (eg. In a microteaching session)
- Competent - is able to prepare a lesson plan and demonstrate most of the teaching skills in a real classroom situation under minimal supervision.
- Proficient - is independently able to prepare a lesson plan, demonstrate most teaching skills and is able to adapt to emerging situations in real classroom situations

**Any other comments / recommendations**

**Name and Signature of Faculty: .....**

**Check List No. 4a**
**K S Hegde Medical Academy**

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**Dissertation Presentation**
**Name of the Student :**
**Date :**
**Name of the Guide :**

Sl. No.	Points to be Observed	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Interest shown in selecting a topic					
2.	Review of literature					
3.	Discussion with Guide and other Faculty					
4.	Quality of protocol					
5.	Preparation of Proforma					
Overall Performance						
<b>Remarks :</b>						

 .....  
**Signature of Co-Guide (if any)**



**Check List No. 4b**
**K S Hegde Medical Academy**

A Constituent College of NITTE (Deemed to be University)

**Continuous Evaluation of Dissertation Work by Guide / Co-Guide**
**Name of the Student :**
**Date :**
**Name of the Guide :**

Sl. No.	Points to be Observed	Poor	Below Average	Average	Good	Very Good
		0	1	2	3	4
1.	Periodic consultation with Guide/Co-guide					
2.	Regular collection of case material					
3.	Depth of analysis/discussion					
4.	Departmental presentation of findings					
5.	Quality of final output					
Overall Performance						
<b>Remarks :</b>						

 .....  
**Signature of Co-Guide (if any)**

 .....  
**Signature of Guide**

