



BLDE UNIVERSITY

PG CURRICULUM

2012-13

MD

Pharmacology

Published by

BLDE UNIVERSITY

[Declared as Deemed to be University u/s 3 of UGC act, 1956, vide notification No.F.9-37/2007-U.3(A)]

The Constituent College

SHRI B. M. PATIL MEDICAL COLLEGE, HOSPITAL & RESEARCH CENTRE

Smt. Bangaramma Sajjan Campus, Sholapur Road, Bijapur - 586103, Karnataka, India.

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B.L.D.E. UNIVERSITY

(Declared vide notification No. F.9-37/2007-U 3 (A) Dated. 29-2-2008 of the MHRD, Government of India under Section 3 of the UGC Act,1956)
The Constituent College

SHRI. B. M. PATIL MEDICAL COLLEGE, HOSPITAL AND RESEARCH CENTRE

BLDEU/REG/PG/2012-13/845

September 20, 2012

NOTIFICATION

Subject: Revised Curriculum for the Post Graduate Degree and Diploma Courses – 2012

Reference:

1. Medical Council of India Regulation on Graduate Medical Education, 1997 and subsequent amendments of the same from time-to-time.
2. Minutes of the meeting of the Academic Council of the University held on April 11, 2012
3. Minutes of the meeting of the BOM of the University held on May 23, 2012.

The Board of Management of University is pleased to approve the Curriculum for Post Graduate Degree and Diploma Courses at its meeting held on May 23, 2012.

The revised curriculum shall be effective, from the Academic Session 2012-13 onwards, for Post Graduate Degree and Diploma Course in the Constituent College of the University viz Shri B. M. Patil Medical College, Hospital and Research Centre.

To,
The Dean, Faculty of Medicine and Principal
Shri B. M. Patil Medical College,
Hospital and Research Centre,
BIJAPUR


REGISTRAR
REGISTRAR.
BLDE University, Bijapur.

Copy to:

1. The Secretary, UGC, New Delhi
2. The Controller of Examinations
3. Prof. & HODs of Pre, Para and Clinical Departments.
4. PS to Hon'ble President
5. PS to Hon'ble Vice Chancellor
6. Office Copy

Smt. Bangaramma Sajjan Campus, Sholapur Road, Bijapur – 586103, Karnataka, India.

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Vision and Mission

- *Committed to provide globally competitive quality medical education.*
- *To provide the best health care facilities in this backward region, in particular, to socially disadvantaged sections of the society.*
- *Constantly striving to become a reputed research University with world-class infrastructure, latest tech-tools for teaching/research and adopting global best practices.*

Section - I

Goals and General Objectives of Postgraduate Medical Education Program

Goal

The goal of postgraduate medical education shall be to produce a competent specialist and / or a medical teacher:

- (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, retraining to the specialty, 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 advances 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.

General Objectives

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

- (i) Recognize the importance of the concerned specialty in the context of the health need 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 specialty concerned on the basis of clinical assessment, and appropriately selected and conducted investigations.
- (vi) Plan and advice measures for the prevention and rehabilitation of patients suffering from disease and disability related to the specialty.
- (vii) Demonstrate skills in documentation of individual case details as well as morbidity and mortality data relevant to the assigned situation.
- (viii) Demonstrate empathy and humane approach towards patients and their families and exhibit interpersonal behavior in accordance with the societal norms and expectations.
- (ix) Play the assigned role in the implementation of national health programs, effectively and responsibly.
- (x) Organize and supervise the chosen/assigned health care services demonstrating adequate managerial skills in the clinic/hospital or the field situation.

- (xi) Develop skills as a self-directed learner; recognize continuing educational needs; select and use appropriate learning resources.
- (xii) Demonstrate competence in basic concept of research methodology and epidemiology, and be able to critically analyse relevant published research literature.
- (xiii) Develop skills in using educational methods and techniques as applicable to the teaching of medical/nursing students, general physicians and paramedical health workers.
- (xiv) Function as an effective leader of a team engaged in health care, research or training.

Statement of the Competencies

Keeping in view the general objectives of postgraduate training, each discipline shall aim at development of specific competencies, which shall be defined and spelt out in clear terms. Each department shall produce a statement and bring it to the notice of the trainees in the beginning of the program so that he or she can direct the efforts towards the attainment of these competencies.

Components of the PG Curriculum

The major components of the PG curriculum shall be:

- Theoretical knowledge
- Practical/clinical Skills
- Training in writing thesis/research articles
- Attitudes, including communication.
- Training in research methodology, medical ethics & medico legal aspects

Source: Medical Council of India, Regulations on Postgraduate Medical Education, 2000. [Amended upto January 2010]

Eligibility for Admission:

Eligibility requirements for Post Graduate Diploma and Degree Courses are: -

1. The candidates seeking admission to these courses should have passed MBBS from the college recognized by Medical Council of India.

Eligibility requirements for Post graduate degree in superspeciality courses, M.Ch./D.M are:

The candidate seeking admission to these courses should have passed MS/MD from the college recognized by Medical Council of India.

2. As per the requisitions of statutory bodies, as laid out in post graduate regulations 2000 of Medical Council of India and its amendments thereof, the minimum percentage of marks in the entrance test conducted by the University for eligibility for admission to Post Graduate courses in broad specialties and super specialties shall be 50 percent for candidates belonging to General category and 40 percent for the candidates belonging to Scheduled Caste, Scheduled Tribes and Other Backward Classes. Eligibility for persons with locomotor disability of lower limbs category will be 45 percent.

Eligibility for Foreign / PIO / NRI students will be based on qualifying examination marks.

The MCI norms to qualify for Admissions

Candidates seeking admission to these Post Graduate Degree courses should have passed M.B.B.S. recognised by Medical Council of India or equivalent qualification and should have obtained permanent Registration from the Medical Council of India or any of the State/ Medical council or candidate should register the same within one month from the date of admission, failing which the admission of the candidate shall be cancelled. Provided that in the case of a foreign national, the MCI may on the payment of prescribed fee for the registration, grant temporary registration for the duration of post graduate training restricted to the medical college/ institute to which the applicant is admitted for the time being exclusively for post graduate studies; provided further, that temporary registration to such foreign national shall be subjected to the condition that such person is duly registered with appropriate registering authority in his /her country wherefrom he has obtained his basic medical qualification ,and is duly recognized by the corresponding Medical Council or concerned authority..

If the candidate fails to fulfill the relevant eligibility requirements as mentioned above he/she will not be considered eligible for admission for Medical Postgraduate Degree and Diploma Courses even if he/she is placed in the merit list of BLDEU-PGET/BLDEU-SUPERSPECIALTY ET.

Obtaining Eligibility Certificate by the University before making Admission

Candidate shall not be admitted for any postgraduate degree/diploma course unless he/she has obtained and produced the eligibility certificate used by the University. The candidate has to make an application to the University with the following documents along with the prescribed fee:

1. MBBS pass/degree certificate issued by the University.
2. Marks cards of all the university examinations passed MBBS course.
3. Attempt Certificate issued by the Principal
4. Certificate regarding the recognition of the Medical College by the Medical Council of India.
5. Completion of internship certificate.
6. In case internship was done in a non-teaching hospital, a certificate from the Medical Council of India that the hospital has been recognized for internship.
7. Registration by any State Medical council and
8. Proof of SC/ST or OBC or physically handicapped status, as the case may be.

In addition to the above mentioned documents, candidate applying for admission to superspeciality courses has to produce degree/pass certificate of MD/MS degree with prescribed fee.

Intake of Students

The intake of students to each course shall be in accordance with the ordinance in this behalf.

Course Duration

- a. M.D. / M.S. Degree Courses:

The course of study shall be for a period of 3 years consisting of 6 terms including examinations. For Candidates possessing recognized two year Postgraduate Diploma in the same subject the duration of the course shall be two years including examinations. (MCI PG REG 2000 10:1)

b. D.M/M Ch Degree Courses; (MCI PG REG 2000, 10:2)

The duration of these courses shall be for a period of 3 years including examinations.

c. Diploma Courses:

The course of study shall be for a period of 2 years consisting of 4 terms including examinations (MCI PG REG 2000, 10.3).

Training Method

The postgraduate training for degree/diploma shall be of residency pattern. The post graduate shall be trained with graded responsibilities in the management and treatment of patients entrusted to his/her care. The participation of the students in all facets of educational process is essential. Every candidate should take part in seminars, group discussions grand rounds, case demonstration, clinics, journal review meetings, CPC and clinical meetings. Every candidate should be required to participate in the teaching and training program of undergraduate students. Training should include involvement in laboratory and experimental work, and research studies. Basic medical sciences students should be posted to allied and relevant clinical departments or institutions. Similarly, clinical subjects' students should be posted to basic medical sciences and allied specialty departments or institutions.

Attendance, Progress and Conduct

A candidate pursuing degree/diploma course should work in the concerned department of the institution for the full period as a full time student. No candidate is permitted to run a clinic/laboratory/nursing home while studying postgraduate course

Each year shall be taken as a unit for the purpose of calculating attendance. Every student shall attend symposia, seminars, conferences, journal review meetings, grand rounds, CPC, case presentation, clinics and lectures during each year as prescribed by the department and not absent himself / herself from work without valid reasons. Every Candidate is required to attend a minimum of 80% of the training during each academic year of the post graduate course. This shall include assignments, assessed full time responsibilities and participation in all facets of educational process. 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. Leave benefits shall be as per university rules.

A post graduate student pursuing degree course in broad specialities, MD,MS and superspeciality courses DM,M.Ch would be required to present one poster presentation, read one paper in national/state conference and to present one research paper which should be published/accepted for publication/sent for publication during the period of his postgraduate studies so as to make him/her to be eligible to appear at the university degree examinations.(MCI, PG 2000,13.9)

Any student who fails to complete the course in the manner stated above shall not be permitted to appear for the University Examinations.

Monitoring Progress of Studies

The learning process of students should be monitored through continuous appraisal and regular assessment. It not only helps teachers to evaluate students, but also students to evaluate themselves. The monitoring is done by the staff of the department based on participation of students in various

teaching / learning activities. It may be structured and assessment done by using checklists that assess various aspects.

The learning outcomes to be assessed include:

- Personal Attitudes,
- Acquisition of Knowledge,
- Clinical and operative skills,
- Teaching skills.

Personal Attitudes:

The essential items are :

- Caring attitudes
- Initiative
- Organizational ability
- Potential to cope with stressful situations and undertake responsibility
- Trustworthiness and reliability
- To understand and communicate intelligibly with patients and others
- To behave in a manner which establishes professional relationships with patients and colleagues
- Ability to work in team
- A critical enquiring approach to the acquisition of knowledge

The Methods used mainly consist of observation. It is appreciated that these items require a degree of subjective assessment by the guide, supervisors and peers.

Acquisition of Knowledge:

The methods used comprise of 'Log Book' which records participation in various teaching / learning activities by the students. The number of activities attended and the number in which presentations are made are to be recorded. The log book should periodically be validated by the supervisors. Some of the activities are listed. The list is not complete. Institutions may include additional activities, if so, desired.

Lectures: Lectures are to be kept to a minimum. They may, however, be employed for teaching certain topics. Lectures may be didactic or integrated.

a) Didactic Lectures: Recommended for selected common topics for post graduate students of all specialties. Few topics are suggested here.

- Bio-statistics
- Use of library,
- Journal review
- Use of computers,
- Appropriate use of AV aids
- Research Methods,
- Search of literature,
- Rational drug therapy
- Medical code of Conduct and Medical Ethics
- National Health and Disease Control Programmes
- Communication skills etc.

These topics may preferably taken up in the first few weeks of the 1st year commonly for all new postgraduate

- b) Integrated teaching : These are recommended to be taken by multidisciplinary teams for selected topics, eg. Jaundice, Diabetes mellitus, thyroid diseases etc.

Journal Review Meeting (Journal club):

The ability to do literature search, in depth study, presentation skills, and use of audio – visual aids are to be assessed. The assessment is made by faculty members and peers attending the meeting using a checklist

Seminars / symposia:

The topics should be assigned to the student well in advance to facilitate in depth study. The ability to do literature search, in depth study, presentation skills and use of audio – visual aids are to be assessed using a checklist.

Clinico-Pathological conferences:

This should be a multidisciplinary case study of an interesting case to train the candidate to solve diagnostic and therapeutic problems by using an analytical approach. The presenter(s) are to be assessed using a check list similar to that used for seminar.

Medical Audit: Periodic morbidity and mortality meeting be held. Attendance and participation in these must be insisted upon. This may not be included in assessment.

Clinical Skills: Day to Day Work: Skills in outpatient and ward work should be assessed periodically. The assessment should include the candidates' sincerity and punctuality, analytical ability and communication skills

Clinical Meetings:

Candidates should periodically present cases to his peers and faculty members. This should be assessed using a check list

Clinical and Procedural Skills:

The candidate should be given graded responsibility to enable learning by apprenticeship. The performance is assessed by the guide by direct observation. Particulars are recorded by the student in the log book.

Teaching Skills:

Candidates should be encouraged to teach undergraduate medical students and paramedical students, if any. This performance should be based on assessment by the faculty members of the department and from feedback from the undergraduate students

Work diary / Log Book:

Every candidate shall maintain a work diary and record his/her participation in the training programs conducted by the department such as journal reviews, seminars, etc. Special mention may be made of the presentations by the candidate as well as details of clinical or laboratory

procedures, if any, conducted by the candidate. The work diary shall be scrutinized by concerned teachers periodically and certified, by the Head of Department and Head of the Institution, and presented during university practical / Clinical examination.

Periodic tests:

In case of degree courses of three years duration (MD/MS, DM, M.Ch), the concerned departments may conduct three tests, two of them be annual tests, one at the end of first year and the other in the second year. The third test may be held three months before the final examination. The tests may include written papers, practical / clinical and viva voce.

One of these practical/clinical tests should be conducted by OSPE (objectively structured practical examination or OSCE (objectively structured clinical examination) method.

Records and marks obtained in such tests will be maintained by the Head of Department and sent to the University, when called for.

In case of diploma courses of two years duration, the concerned departments may conduct two tests, one of them be at the end of first year and the other in the second year three months before the final examination. The tests may include written papers, practical /clinical and viva voce.

One of these practical/clinical tests should be conducted by OSPE or OSCE method.

Records: Records and marks obtained in tests will be maintained by the Head of the Departments and will be made available to the University or MCI.

Procedure for defaulter:

Every department should have a committee to review such situations. The defaulting candidate is counseled by the guide and head of the department. In extreme cases of default the departmental committee may recommend that defaulting candidate be withheld from appearing the examination, if she/he fails to fulfill the requirements in spite of being given adequate chances to set himself or herself right.

Dissertation: Every candidate pursuing MD/MS degree course is required to carry out work on a selected research project under the guidance of a recognized post graduate teacher. The results of such a work shall be submitted in the form of a dissertation.

The dissertation is aimed to train a post graduate student in research methods and techniques. It includes identification of a problem, formulation of hypothesis, search and 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.

Every candidate shall submit to the Registrar (Academic) of the University in the prescribed proforma, a synopsis containing particulars of proposed dissertation work within six months from the date of commencement of the course on or before the dates notified by the University. The synopsis shall be sent through the proper channel.

Such synopsis will be reviewed and the dissertation topic will be registered by the University. No change in the dissertation topic or guide shall be made without prior approval of the University.

The dissertation shall be written under the following headings:

1. Introduction
2. Aims or Objectives of study
3. Review of Literature
4. Material and Methods
5. Results
6. Discussion
7. Conclusion
8. Summary
9. References
10. Tables
11. Annexure

The written text of dissertation shall be not less than 50 pages and shall not exceed 150 pages excluding references, tables, questionnaires and other annexure. It should be neatly typed in double line spacing on one side of paper (A4 size, 8.27" x 11.69") and bound properly. Spiral binding should be avoided. The dissertation shall be certified by the guide, head of the department and head of the Institution.

Four copies of dissertation thus prepared shall be submitted to the Controller of Examinations six months before final examination on or before the dates notified by the University.

The dissertation shall be valued by examiners appointed by the university. Approval of dissertation work is an essential precondition for a candidate to appear in the University examination.

Guide:

The academic qualification and teaching experience required for recognition by this University as a guide for dissertation work is as per Medical Council of India Minimum Qualifications for Teachers in Medical Institutions Regulations, 1998. Teachers in a medical college/institution having a total of eight years teaching experience out of which at least five years teaching experience as Lecturer or Assistant Professor gained after obtaining post graduate degree shall be recognized as post graduate teachers.

A Co-guide may be included provided the work requires substantial contribution from a sister department or from another medical institution recognized for teaching/training by this University / Medical Council of India. The co-guide shall be a recognized post graduate teacher of BLDE University

Change of guide:

In the event of a registered guide leaving the college for any reason or in the event of death of guide, guide may be changed with prior permission from the university.

Schedule of Examination:

The examination for M.D. /M.S and DM/M.Ch courses shall be held at the end of three academic years (six academic terms). The examination for the diploma courses shall be held at the end of two academic years (four academic terms).

The university shall conduct two examinations in a year at an interval of four to six months between the two examinations. Not more than two examinations shall be conducted in an academic year.

Scheme of Examination

M.D. /M.S. Degree

M.D. / M.S. Degree examinations in any subject shall consist of dissertation, written papers (Theory), Practical/Clinical and Viva Voce.

Dissertation:

Every candidate shall carryout work and submit a Dissertation as indicated above. Acceptance of dissertation shall be a precondition for the candidate to appear for the final examination.

Written Examination (Theory):

Written examination shall consist of **four** question papers, each of **three** hours duration. Each paper shall carry 100 marks. Out of the **four** papers, the 1st paper in clinical subjects will be on applied aspects of basic medical sciences. Recent advances may be asked in any or all the papers. In basic medical subjects and Para-clinical -subjects, questions on applied clinical aspects should also be asked.

Practical / Clinical Examination:

In case of practical examination, it should be aimed at assessing competence and skills of techniques and procedures as well as testing students ability to make relevant and valid observations, interpretations and inference of laboratory or experimental work relating to his/her subject.

In case of clinical examination, it should aim at examining clinical skills and competence of candidates for undertaking independent work as a specialist. Each candidate should examine at least one long case and two short cases.

The total marks for Practical / clinical examination shall be 200.

Viva Voce:

Examination shall aim at assessing depth of knowledge, logical reasoning, confidence and oral communication skills.

The total marks shall be 100:

- 80 Marks, for examination of all components of syllabus
- 20 Marks for Pedagogy

Examiners:

There shall be at least four examiners in each subject. Out of them two shall be external examiners and two shall be internal examiners. The qualification and teaching experience for appointment as an examiner shall be as laid down by the Medical Council of India.

Criteria for declaring as pass in University Examination: A candidate shall secure not less than 50% marks in each head of passing which shall include (1) Theory, (2) Practical/clinical and (3) viva voce examination. The candidate should pass independently in practical/clinical examination and Viva Voce vide MCI pg 2000 reg no 14(4) (Ciii).

A candidate securing less than 50% of marks as described above shall be declared to have failed in the examination. Failed candidate may appear in any subsequent examination upon payment of fresh fee to the Controller of Examinations.

Declaration of distinction: A successful candidate passing the University examination in first attempt will be declared to have passed the examination with distinction, if the grand total aggregate of marks is 75 percent and above.

Distinction will not be awarded for candidates passing the examination in more than one attempt.

D.M/M.Ch Degree

DM/M.Ch Degree examinations in any subject shall consist of written theory papers (theory), practical/clinical and Viva voce.

Written Examination (Theory):

Written examination shall consist of **four** question papers, each of **three** hours duration. Each paper shall carry 100 marks. Out of the **four** papers, the 1st paper in clinical subjects will be on applied aspects of basic medical sciences. Recent advances may be asked in any or all the papers. In basic medical subjects and Para-clinical -subjects, questions on applied clinical aspects should also be asked.

Practical / Clinical Examination:

In case of practical examination, it should be aimed at assessing competence and skills of techniques and procedures as well as testing students ability to make relevant and valid observations, interpretations and inference of laboratory or experimental work relating to his/her subject.

In case of clinical examination, it should aim at examining clinical skills, competence of candidates for undertaking independent work as a specialist. Each candidate should examine at least one long case and two short cases.

The total marks for Practical / clinical examination shall be 200.

Viva Voce:

Examination shall aim at assessing depth of knowledge, logical reasoning, confidence and oral communication skills.

The total marks shall be 100:

- 80 Marks, for examination of all components of syllabus
- 20 Marks for Pedagogy

Examiners:

There shall be at least four examiners in each subject. Out of them two shall be external examiners and two shall be internal examiners. The qualification and teaching experience for appointment as an examiner shall be as laid down by the Medical Council of India.

Criteria for declaring as pass in University Examination: A candidate shall secure not less than 50% marks in each head of passing which shall include (1) Theory, (2) Practical including clinical and (3)viva voce examination. The candidate should pass independently in practical/clinical examination vide MCI pg 2000 reg no 144-c (iii).

Declaration of distinction: A successful candidate passing the University examination in first attempt will be declared to have passed the examination with distinction, if the grand total aggregate of marks is 75 percent and above.

A candidate securing less than 50% of marks as described above shall be declared to have failed in the examination. Failed candidate may appear in any subsequent examination upon payment of fresh fee to the Controller of Examinations.

Declaration of distinction: A successful candidate passing the University examination in first attempt will be declared to have passed the examination with distinction, if the grand total aggregate of marks is 75 percent and above.

Distinction will not be awarded for candidates passing the examination in more than one attempt.

Diploma Examination:

Diploma examination in any subject shall consist of Theory (written papers),

Practical / Clinical and Viva-Voce.

Theory:

There shall be **three** written question papers each carrying 100 marks. Each paper will be of **three** hours duration. In clinical subjects one paper out of this shall be on basic medical sciences. In basic medical subjects and Para clinical subjects, questions on applied clinical aspects should also be asked.

Practical / Clinical Examination:

In case of practical examination it should be aimed at assessing competence, skills related to laboratory procedures as well as testing students ability to make relevant and valid observations, interpretation of laboratory or experimental work relevant to his/her subject.

In case of clinical examination, it should aim at examining clinical skills and competence of candidates for undertaking independent work as a specialist. Each candidate should examine at least one long case and two short cases.

The maximum marks for Practical/Clinical shall be 150.

Viva-Voce Examination: Viva Voce examination should aim at assessing depth of knowledge, logical reasoning, confidence and oral communication skills. The total marks shall be 50.

Criteria for declaring as pass in University Examination: A candidate shall secure not less than 50% marks in each head of passing which shall include (1) Theory, (2) Practical / clinical and viva voce examination.

A candidate securing less than 50% of marks as described above shall be declared to have failed in the examination. Failed candidate may appear in any subsequent examination upon payment of fresh fee to the Controller of Examinations.

Declaration of distinction: A successful candidate passing the University examination in first attempt will be declared to have passed the examination with distinction, if the grand total aggregate of marks is 75% and above. Distinction will not be awarded for candidates passing the examination in more than one attempt.

Examiners:

There shall be at least four examiners in each subject. Out of them, two shall be external examiners and two shall be internal examiners. The qualification and teaching experience for appointment as an examiner shall be as laid down by the Medical Council of India.

Number of Candidates per day:

The maximum number of candidates for practical / clinical and viva-voce examination shall be as under:

MD / MS Courses: Maximum of 6 per day

Diploma Course: Maximum of 6 per day

DM/M.Ch Maximum of 3 per day

Section II

DEPARTMENT OF PHARMACOLOGY

CURRICULUM FOR MD PHARMACOLOGY -2013

GOALS :

After completing the postgraduate medical education (MD) in pharmacology, the student should be able to:

1. Teach & train UG ,PG medical & students of allied subjects the basic principles of pharmacology & be up to date with recent advances,
2. Impart skills related to teaching, research methodology & pharmaceutical industry requirements.
3. Understand the importance of Pharmacovigilance, Eco-pharmacovigilance & Pharmacoeconomics.
4. Detect, treat & manage toxicological aspects of drugs and poisons.
5. Understand & apply the recent advances in pharmacological and its applied aspects in clinical practice.
6. Devise experimental models without using animals/animal tissues.
7. Plan and organize projects using managerial & leadership skills.
8. Design protocol for clinical trials
9. Incorporate knowledge of information technology in medical sciences
10. Function as a productive member of a team engaged in research, education and industry
11. Play the assigned role in the implementation of national health programs effectively, including planning of drug procurement and distribution.

General Objectives

1. Demonstrate sound knowledge of general pharmacology principles like pharmacokinetics and Pharmacodynamics of drugs, drug interactions and adverse effects.
2. Study the effects of drugs on various systems in the body and rational drug therapy.
3. Plan & conduct lecture, practical demonstration, and tutorial classes for students of medical & allied disciplines.
4. Carry out screening of drugs for pharmacological and toxicological profile.
5. Carry out drug related literature search, formulate research projects and undertake the same. Apply appropriate statistical methods for analyzing and summarizing data.

6. Present research findings in conferences (Oral/Poster sessions), communicate research/ educational papers in peer reviewed journals. Critically review and comment on research papers.
7. Measure drug levels in blood and other biological fluids using suitable chemical & bioassay methods and interpret the same in therapeutic/toxicological context.
8. Monitor adverse drug reactions. Carry out therapeutic audit & provide drug information service to health personnel.
9. Use computer and IT tools for teaching, research & presentation/publication of data.
10. Design protocols to conduct experimental studies in animals and clinical trials independently.
11. To demonstrate computer simulated animal experiments.
12. Demonstrate knowledge of National Health Policy, essential drug concept/ lists and supervise drug management in a hospital.
13. Demonstrate knowledge of drug rules and regulations existing in the country.
14. Provide appropriate advice related to selection of drug, drug usage (desirable and undesirable effects, kinetics, interactions), Precautions and measures to be taken during administration of drug and treating the ADRs in a given patient taking into consideration physiological, psychological & pathological features
15. Audit drug utilization.
16. Assess emergency situations while carrying out drug trials and institute exigency management till appropriate assistance from clinical side is available.
17. Plan and carry out both laboratory and clinical research with adherence to scientific methodology and GLP/GCP guidelines
18. Be aware of legal and ethical aspects of drug evaluation.
19. Be aware of regulatory procedures needed to be carried out prior to the marketing of a new drug in India.
20. Understand and apply ethical principles involved in animal and human experiments.
21. Handle animals to conduct experiments e.g. screening of various drugs

22. Perform qualitative and quantitative identification and estimation of drugs in different samples of body fluids.
23. Develop skills as a self-directed learner, recognize continuing educational needs; use appropriate learning resources and be able to critically analyze relevant published literature
- 24) Incorporate knowledge of information technology in medical sciences
- 25) Function as a productive member of a team engaged in research, education & industry

Specific Learning objectives

Psychomotor domain:

- 1) Perform common experimental procedures required for evaluation of new drug with competence
- 2) Perform common clinical procedures required for evaluation of drug in human volunteers and patients with competence
- 3) Organize and manage administrative responsibilities for routine day to day work as well as new situations
- 4) Carry out necessary resuscitative measures in emergency situations arising during drug evaluation
- 5) Use teaching-learning media effectively.

Affective domain:

- 1) Appreciate socio-psychological, cultural & environmental factors affecting health & drug usage.
- 2) Appreciate the importance and implementation of National health programmes in context to rational drug utilization
- 3) Be aware of the importance of cost-effectiveness in patient management
- 4) Be aware of service activities which a pharmacologist can undertake viz. Therapeutic Drug Monitoring (TDM), Adverse Drug Reactions (ADR) monitoring, drug information services, poison control centre, drug auditing etc.
- 5) Adopt ethical principles while conducting experimental and human research
- 6) Develop communication skills to interact with patients, peers and paramedical staff
- 7) Realize the importance of team work
- 8) Develop attitudes required for professional responsibilities.

DETAILED COURSE CONTENT

Duration of course 36 months (6 semesters) including exams.

DETAILS OF TEACHING /LEARNING ACTIVITIES& SKILL DEVELOPMENT

THEORY

Chapter 1

General Pharmacological Principles and Applied Sciences

Pharmaco-kinetic and Pharmaco dynamic principles including molecular mechanism of action. Factors modifying drug action, Pharmaco-genetics, Chrono-pharmacology, Adverse effects of drugs, Drug dependence, Toxicology, Dose-response relationships, structure-activity relationships, and Physiological and biochemical basis of drug action, etiopathogenesis of diseases relevant to therapeutic use of drugs, Basic microbiology, immunology and molecular biology. History of pharmacology, sources of drug information and use of Information Technology.

Chapter II: Systemic Pharmacology, Chemotherapy and Therapeutics:

Pharmacology of drugs acting on autonomic, peripheral and central nervous systems; cardiovascular, endocrine, respiratory, renal, gastrointestinal and haemopoietic systems and treatment of disease affecting these systems; Pharmacology of anti-microbial and anti-parasitic drugs and treatment of infective diseases; cancer chemotherapy, immuno-pharmacology, gene therapy and evidence based medicine.

Chapter III: Experimental Pharmacology, Bioassay and Statistics:

Experimental methodologies involved in the discovery of drugs (in vivo, in vitro ex vivo). Animal handling and animal care. Methods of anaesthetizing animals and methods of euthanasia. Restraining and blood collection methods. Drug screening methods involved in the evaluation of anti-ulcer, antidepressant, antianginals anti-hypertensive, anti-arrhythmic, anti-diabetic, anti-cataract, anti-platelet, anticancer, anti-inflammatory, anti-diarrheal, anti-epileptic, analgesic and anti-inflammatory, anti-thyroid, antipyretic, anti-glaucoma, anti-hyperlipidemic anti-asthmatics drugs and cough suppressants etc. Drug screening methods used for heart failure, posterior pituitary, adrenal steroid (gluco & mineralo), testicular, parathyroid, ovarian, thyroid hormones, Methods involved in testing teratogenicity, carcinogenicity and organ toxicities in animals.

Chapter IV: Clinical Pharmacology and Recent advances:

Development of new drugs, protocol designing, phases, methodology and ethics of clinical trials, Clinical Pharmaco-kinetics and Pharmaco-dynamic studies and post marketing surveillance,

Therapeutic drug monitoring Pharmaco-vigilance, ADR monitoring, drug information service, drug utilization studies, therapeutic essential drug concept and rational prescribing, GLP and GMP systems

Recent advances in understanding of mechanism of drug action and treatment of diseases; new drugs and new uses of old drugs.

PRACTICAL:

Experimental Methods discussion:

A Screening & evaluation of drug action including animal models for study of following actions:

- | | |
|---------------------------------|--|
| 1. Analgesic | 14. Local anaesthetic |
| 2. Anti-inflammatory | 15. Antihistaminics, antiallergic |
| 3. Antipyretic; pyrogen testing | 16. Antisecretory & drugs for peptic ulcer |
| 4. Anticonvulsant | 17. Antiemetic |
| 5. Ant anxiety | 18. Hypoglycemic |
| 6. Antipsychotic | 19. Anti fertility |
| 7. Antidepressant | 20. Anticancer |
| 8. Antiparkinsonian | 21. Diuretic |
| 9. Sedative, hypnotics | 22. Anti malarial |
| 10. Antihypertensive | 23. Anti tubercular |
| 11. Anti anginal | 24. Antidiabetic |
| 12. Ant arrhythmic | 25. Anti atherosclerotic |
| 13. Skeletal muscle relaxant | 26. Bronchodilator & anti asthmatic drugs |

B. Bioassay of:

1. Acetylcholine
2. Adrenaline/nor adrenaline
3. Histamine
4. 5-Hydroxytryptamine
5. Insulin
6. Antibiotics
7. Digoxin
8. Gluco corticoids

- C. Methods for studying absorption, biotransformation and excretion of drugs.
- D. Limitations of animal experiments in drug evaluation
- E. Quantitative study of agonists and antagonists on isolated tissues.
- F. Measurement of blood pressure in conscious and anaesthetized animals.
- G. Extraction, purification and characterization of active principles from plant sources/crude products.

EXPERIMENTAL PHARMACOLOGY EXERCISES

1. Frog's rectus abdominis muscle: dose response curve (DRC) and cumulative DRC of acetylcholine; potentiation of Ach by physostigmine and antagonism by tubocurarine/pancuronium.
2. Study of drug action on perfused frog's heart.
3. Study of drug action on isolated guinea pig ileum or rabbit intestine.
4. Dose-response curve of histamine on isolated guinea pig ileum, Cumulative dose response curve of histamine in isolated guinea pig tracheal chain.
5. Bioassay of histamine on guinea pig ileum by matching method, 3 point method and 4 point (Latin square design) method.
6. Bioassay of Ach on frog's rectus abdominis muscle
7. Bioassay of adrenaline on rabbit duodenum
8. Bioassay of 5-HT on estrogen primed rat uterus.
9. Study of drug acting on isolated perfused rabbit heart (Langendorffs technique).
10. Demonstration of rabbit head drop with d-tubocurarine and its reversal by neostigmine.
11. Study of neuromuscular blocking agents using phrenic nerve-diaphragm preparation of rat.
12. Study of local anaesthetics by rabbit cornea, guinea pig intradermal wheal, frog lumbar plexus.
13. Study of anti-convulsant activity of drugs on maximal electroshock seizures and pentylenetetrazole induced convulsions in rats.
14. Study of analgesic activity of drugs using rat tail-hotwire method, hot plate method, acetic acid induced writhing.
15. Study of anti-inflammatory activity of drugs against carrageenin induced rat paw oedema.
16. Antagonism of histamine aerosol induced bronchospasm by anti-histaminics.
17. Effect of psychopharmacological drugs on conditioned avoidance response (cook's pole climbing).
18. Effect of psychopharmacological agents on foot shock induced aggression in rats.

19. Effect of psychopharmacological agents on elevated plus maze.
20. Effect of drugs on spontaneous motor activity of mice, photoactometer.
21. Study of anorectic activity of amphetamine in mice.
22. Potentiation of barbiturate hypnosis by chlorpromazine
23. Study of miotics and mydriatics on rabbit eye.

Minor procedures:

- i. Rat/Mouse tail vein injection
- ii. Administration of drugs to rats by gastric canula
- iii. Collection of blood from rat tail.
- iv. Collection of blood by Cardiac puncture in rat.
- v. Injection of drugs through marginal ear vein of rabbits.
- vi. Intraperitoneal and subcutaneous injection to rats and mice.

Chemical Pharmacology Exercises:

- i. Identification of steroids, Alkaloids, Glycosides, Iodides & salicylates using chemical tests.
- ii. Estimation of drug levels using colorimetry, spectrophotometer, fluorimetry, flame photometry, high performance liquid chromatography (HPLC), enzyme linked immunoassay (ELISA).

Clinical Pharmacology Exercises

1. Recording B.P. in human volunteers.
2. Recording of ECG and measurement of heart rate, PR interval, QT interval, ST segment depression etc. in human volunteers.
3. Study of effect of sublingual nitroglycerine tablet on BP and heart rate.
4. Study of effect of Beta-blockers on exercise tolerance in volunteers utilizing treadmill/bicycle ergometry/ Master's two step test.
5. Spirometry and respiratory function tests and effect of bronchodilators
6. Psychomotor testing in volunteers by 6 letter cancellation test, digit-letter symbol substitution test finger tapping test.
7. Assessment of analgesic activity in volunteers by soda water bottle cap B.P. cuff pressure test.
8. Mydiatric, miotic and cycloplegic effect of drugs in human subjects.
9. Effect of anticholinergic drugs on salivation, pupillary size, heart rate and memory.
10. Training at poison information center. Determination of plasma cholinesterases level in organo-phosphorus poisoned patients. Spot test for aluminum phosphide poisoning. Estimation of lead in drinking water and patient's urine.

11. Molarity calculations and preparation of reagents. Estimation of serum salicylate levels using spectro-fluorimetric method. Estimation of plasma Phenobarbitone concentration using spectro-photometer.

Computer Aided Learning (CAL) Program:

Proficiency in using CAL programs for demonstration of effects of drugs on animals.

Statistics

Use of calculators and electronic spread sheets for understanding of:

- _ Elements of data collection and presentation of data
- _ Measures of central tendency and dispersion
- _ Non parametric tests
- _ Parametric tests (including ANOVA)
- _ Correlation and regression

SKILLS:

1. Elementary principles of common chemical techniques such as colorimeter, spectrophotometer, flame photometer etc.
2. Handling of small animals including various anaesthetic techniques.
3. Recording of blood pressure (In vivo and computer assisted learning programme)
4. Screening of drugs using appropriate models
5. Administration of drugs /chemicals to animals (parenteral and enteral routes)
6. Isolated tissue preparations for dose response and bioassay
7. Use of various methods to evaluate drug effects in humans.
8. Use of appropriate statistical techniques to analyze the results
9. Training at poison information centre.
10. Determination of plasma cholinesterase levels in organophosphorus poisoned patients.
11. Spectrophoto & fluorimetric estimations of drugs in biological fluids.
12. Calculation of Pharmacokinetic estimates from given concentration vs. time data
13. Draft an Investigational new drug (IND) and New drug development (NDD) application for the approval of a numbered compound.
14. Draft a protocol to conduct phase II clinical trial for a newly discovered non-steroidal anti-inflammatory drug.

MONITORING PROGRESS OF STUDY:

The learning process of students should be monitored through continuous appraisal and regular assessment. It not only helps teachers to evaluate students, but also students to evaluate themselves. The monitoring is done by the staff of the department based on participation of students in various teaching/learning activities. It may be structured and assessment done by using checklists that assess various aspects.

The learning out comes to be assessed include:

- Personal Attitudes,
- Acquisition of Knowledge,
- Teaching skills.

1. Personal Attitudes:

The essential items are:

- Caring attitudes
- Initiative
- Organizational ability
- Potential to cope with stressful situations and undertake responsibility
- Trust worthiness and reliability
- To understand and communicate intelligibly with patients and others.
- To behave in a manner which establishes professional relationship with patient and colleagues
- Ability to work in team
- A critical enquiring approach to the acquisition of knowledge

The methods used mainly consist of observation. It is appreciated that these items require a degree of subjective assessment by the guide, supervisors and peers.

2. Acquisition of Knowledge:

The methods used comprise of 'Log Book' which records participation in various teaching/learning activities by the students. The number of activities attended and the number in which presentations are made are to be recorded. The log book should periodically be validated by the supervisors. Some of the activities & their frequency are listed.

Item	Frequency
1. Thesis work	Once a week
2. Journal club/Drug review	Once a week
3. Practical (Expt./Chemical/Human)	Once a week
4. Seminar /Symposium etc.	Once a week
5. Statistical exercise	Once a fortnight
6. Pharmacokinetic exercise	Once a fortnight
7. Theory test	Once in six months
8. Grand Viva	Once a year

POSTING IN OTHER DEPARTMENTS

A candidate of the M.D. Degree Course in Pharmacology needs to be well versed in the applied aspects of pharmacology and therapeutics. Actual postings in the wards of the Clinical departments will help the candidate get acquainted with the patterns of drug use, rational drug therapy, adverse drug reactions and interactions etc., Such postings will also help him gain confidence in interacting with the clinicians, which will be needed if he chooses to be a clinical pharmacologist in his future career.

The following clinical postings are recommended:

Department	Period of Posting
General Medicine	1½ Months
Pediatrics	01 Month
Anaesthesiology & I.C.U.	15 days
Dermatology & Psychiatry	15 days
Instrumentation /Central Research Lab	15 days

Total duration of clinical postings- 4 months. These postings shall be during the initial phase of the studies. Monitoring postings in clinical departments would be through daily discussions with the faculty during the afternoon session & as part of maintenance of work diary.

Schedule of work time table

First year

1. Introduction to pharmacology and its branches.
2. Selection of dissertation topic
3. Rotation in labs
4. Teaching & Learning activities

Second year

1. Teaching & Learning activities
2. Posting to clinical depts...
3. Dissertation work

4. Visit to Clinical research organizations (CRO)/ attend clinical pharmacology and teaching learning workshops

Third year

1. Dissertation completion
2. Teaching & Learning activities
3. Presentation of research papers in conference & publication

DISSERTATION

- a. Every candidate is required to carry out work on a selected research project under the guidance of a recognized postgraduate teacher. The results of such work shall be submitted in the form of dissertation.
- b. The dissertation is aimed to train the candidate in pharmacological research methods and techniques. It includes identification of a problem, formulation of a hypothesis, search and review of relevant literature, getting acquainted with recent advances and drawing conclusions.
- c. Registration of dissertation topic as per University norms.
- d. Dissertation shall be valued by examiners. Prior acceptance of the dissertation shall be a precondition for a candidate to appear for the final examination.
- e. Details are available In Section 1

PAPER PRESENTATION & RESEARCH PROJECTS

Post graduate students are required to present one poster presentation, to read one paper at a national / state conference and to present one research paper which should be published/ accepted for publication / sent for publication during the period of his post graduate studies so as to make him eligible to appear for P G degree examination.

Assessment

All the PG residents should be assessed daily also periodically for their academic activities by all teachers.

Academic Activity: Performance during presentation at Journal club/Seminar/Case discussion and other academic sessions, proficiency in skills will be assessed periodically as per check list.

End of term theory examination: Written test conducted at end of 1st, 2nd year and 9 months

End of term practical/oral examination: Practical exam and viva examination at end of 2 years and 9 months.

SCHEME OF EXAMINATION

A) Theory written Examination

There shall be four question papers, each of three hours duration, carrying 100 marks. Each paper shall consist of two long essay questions each carrying 20 marks and six short essay type questions each carrying 10 marks. Questions on recent advance may be asked in any or all the papers. Details of distribution of topics for each paper will be as follows:

Paper I: General Pharmacological Principles and Applied Sciences

Paper II: Systemic Pharmacology, Chemotherapy and Therapeutics:

Paper III: Experimental Pharmacology, Bioassay and Statistics:

Paper IV : Clinical Pharmacology and Recent advances:

B. Practical Examination (Total 200 Marks)

Practical are to be held on 2 days, along with Viva voce in the end

I Major Experiment:

1. One expt. pharmacology exercise on intact animals like anticonvulsant, analgesic and skeletal muscle relaxant activity. 50 Marks
2. One expt. pharmacology exercise on isolated organ like in frog rectus muscle, guinea pig ileum, rabbit intestine and rat uterus. 30 marks

II Minor Experiments

1. Qualitative - Identification of unknown drug using chemical tests/ intact animals.-30 Marks
2. Technique demonstration -20 Marks
3. Protocol writing of clinical trials -20 Marks

III Clinical Pharmacology any two : 25 Marks each X 2 = 50 marks

1. Calculation of Kinetic parameters
2. Case discussion pertaining to drug usage
3. Drug related problem solving
4. Writing a protocol for clinical trial

C VIVA VOCE - 100 Marks

1) Viva voce Examination: (80 Marks)

Students will be examined by all the examiners together, about assessing depth of knowledge, comprehension, analytical approach, expression and interpretation of data. Student shall also be given case reports, charts for interpretation. It includes discussion on dissertation.

2) Pedagogy Exercise: (20 Marks)

A topic is given to each candidate along with the Practical Examination on the first day. Student is asked to make a presentation on the topic on the second day for 8-10 minutes.

Maximum marks for	Theory	Practical	Viva	Grand Total
M.D. Pharmacology	400	200	100	700

RECOMMENDED BOOKS & JOURNALS

Books:- Recent editions of

1. Lawrence Brunet ,Goodman and Gilman's The Pharmacological Basis of Therapeutics, Twelfth Edition, The Tata McGraw-Hill Education [ISBN-13 9780071624428; ISBN-10 0071624422]
2. Humphrey P. Rang, Maureen M. Dale, James M. Ritter, Rod J. Flower, Graeme Henderson. Rang & Dale's Pharmacology, Churchill Livingstone, [ISBN-13 9781437719338; ISBN-10 1437719333]
3. P. N. Bennett, Morris J. Brown, Peter N. Bennett. Clinical Pharmacology. Churchill Livingstone [ISBN-13 9780702040849; ISBN-10 0702040843]
4. M. N. Ghosh. Fundamentals of Experimental Pharmacology. Hilton & Company
5. Bertram G. Katzung, Bertram Katzung, Susan Masters. Basic and Clinical Pharmacology. McGraw-Hill Medical Publishing
6. F. S. K. Barar. Essential Of Pharmacotherapeutuics. New edition Edition. Publisher: S.Chand Publishing
7. McPhee, Maxine Papadakis, Stephen McPhee. Current Medical Diagnosis and Treatment 2013.. McGraw-Hill Medical Publishing
8. SK Gupta. Drug Screening Methods (Preclinical Evaluation of New Drugs). Jaypee Brothers Medical Publishers (p) Ltd.
9. Avery's Drug Treatment. T M. Speight & NHG Holford (Eds), Adis' International
10. Critical Appraisal of Epidemiological studies and clinical trials- Mark Elwood. Oxford press.
11. Evaluation of drug activities: Pharmacometrics. D R Laurence and ALBacharach (Eds) Academic press London.
12. Introductory medical statistics. Mould RF (Ed), Adam Hilger, Bristol & Philadelphia.

Journals:

1. Journal of Pharmacology and Experimental Therapeutics
2. Journal of Pharmacy and Pharmacology
3. Drugs (Monthly Journal published by Adis International)
4. Clinical Pharmacology and Therapeutics.
5. Indian Journal of Pharmacology.
6. Annual Review of Pharmacology (last 5 years)
7. Trends in Pharmaceutical Sciences.
8. British Journal of Pharmacology

SECTION – III

MEDICAL ETHICS

Sensitization and Practice

Introduction

There is now a shift from the traditional individual patient, doctor relationship, and medical care. With the advances in science and technology and the needs of patient, their families and the community, there is an increased concern with the health of society. There is a shift to greater accountability to the society. Doctors and health professionals are confronted with many ethical problems. It is, therefore necessary to be prepared to deal with these problems. To accomplish the Goal (i), General Objectives (ii) stated in Chapter II (pages 2.1 to 2.3), and develop human values it is urged that **ethical sensitization** be achieved by lectures or discussion on ethical issues, clinical case discussion of cases with an important ethical component and by including ethical aspects in discussion in all case presentations, bedside rounds and academic postgraduate programs.

Course Contents

1. Introduction to Medical Ethics

What is Ethics?

What are values and norms?

Relationship between being ethical and human fulfillment

How to form a value system in one's personal and professional life

Heteronomous Ethics and Autonomous Ethics

Freedom and personal Responsibility

2. Definition of Medical Ethics

Difference between medical ethics and bio-ethics

Major Principles of Medical Ethics 0

Beneficence = fraternity

Justice = equality

Self determination (autonomy) = liberty

3. Perspective of Medical Ethics

The Hippocratic Oath

The Declaration of Helsinki

The WHO Declaration of Geneva

International code of Medical Ethics (1993)

Medical Council of India Code of Ethics

4. Ethics of the Individual

The patient as a person

The Right to be respected

Truth and confidentiality

The autonomy of decision

The concept of disease, health and healing

The Right to health

Ethics of Behavior modification

The Physician – Patient relationship

Organ donation

5. The Ethics of Human life

What is human life?

Criteria for distinguishing the human and the non-human

Reasons for respecting human life

The beginning of human life

Conception, contraception

Abortion

Prenatal sex-determination

In vitro fertilization (IVF), Artificial Insemination by Husband (AIH)

Artificial Insemination by Donor (AID)

Surrogate motherhood, Semen Intra fallopian Transfer (SIFT),

Gamete Intra fallopian Transfer (GIFT), Zygote Intra fallopian Transfer (ZIFT),

Genetic Engineering

6. The family and society in Medical Ethics
 - The Ethics of human sexuality
 - Family Planning perspectives
 - Prolongation of life
 - Advanced life directives – The Living Will
 - Euthanasia
 - Cancer and Terminal Care

7. Profession Ethics
 - Code of conduct
 - Contract and confidentiality
 - Charging of fees, Fee-splitting
 - Prescription of drugs
 - Over-investigating the patient
 - Low – Cost drugs, vitamins and tonics
 - Allocation of resources in health cares
 - Malpractice and Negligence

8. Research Ethics
 - Animal and experimental research / humanness
 - Human experimentation
 - Human volunteer research – Informed Consent
 - Drug trials\
 - ICMR Guidelines for Ethical Conduct of Research – Human and Animal
 - ICH / GCP Guidelines
 - Schedule Y of the Drugs and Cosmetics Act.

9. Ethical work -up of cases
 - Gathering all scientific factors
 - Gathering all human factors
 - Gathering value factors
 - Identifying areas of value – conflict, setting of priorities,
 - Working our criteria towards decisions

SECTION-IV

Check List – I

MODEL CHECK-LIST FOR EVALUATION OF JOURNAL

REVIEW PRESENTATIONS

Name of the Student:

Name of the Faculty/Observer:

Date:

Title and author

Source

Sl. No.	Items for observation during presentation	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Article chosen was					
2.	Extent of understanding of scope & objectives of the paper by the candidate					
3.	whether cross references have been consulted					
4.	Whether other relevant publications consulted					
5.	Ability to respond to questions on the paper/subject					
6.	Audio-Visual aids used					
7.	Ability to defend the paper					
8.	Clarity of presentation					
9.	Any other observation					
	Total Score					

Check List – II

MODEL CHECK-LIST FOR EVALUATION OF SEMINAR PRESENTATIONS

Name of the student:

Name of the Faculty/Observer:

Date :

Topic

Guide

Sl. No.	Items for observation during Presentation	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Whether other relevant publications consulted					
2.	whether cross references have been consulted					
3.	Completeness of preparation					
4.	Clarity of Presentation					
5.	Understanding of subject					
6.	Ability to answer questions					
7.	Time scheduling					
8.	Appropriate use of Audio-Visual aids					
9.	Overall performance					
10.	Any other observation					
	Total Score					

Check List – III

MODEL CHECK-LIST FOR EVALUATION OF TEACHING SKILL

PRACTICE

Sl. No.	Items for observation during Presentation	Strong Point	Weak Point
1.	Communication of the purpose of the talk		
2.	Evokes audience interest in the subject		
3.	The introduction		
4.	The sequence of ideas		
5.	The use of practical examples and/or illustrations		
6.	Speaking style (enjoyable, monotonous, etc., specify)		
7.	Attempts audience participation		
8.	Summary of the main points at the end		
9.	Asks questions		
10.	Answers questions asked by the audience		
11.	Rapport of speaker with his audience		
12.	Effectiveness of the talk		
13.	Uses AV aids appropriately		

Check List-IV

MODEL CHECK LIST FOR DISSERTATION PRESENTION

Name of the Student:

Name of the Faculty:

Date:

Sl. No.	Points to be considered	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Interest shown in selecting a topic					
2.	Appropriate review of literature					
3.	Discussion with guide & other faculty					
4.	Quality of Protocol					
5.	Preparation of Proforma					
6.	Title <ul style="list-style-type: none">• Appropriateness• Clarity and brevity• Focus on topic					
7.	Introduction <ul style="list-style-type: none">• Purpose of study• Mention of lacuna• Hypothesis, if any					
8.	Review of literature <ul style="list-style-type: none">• Relavance• Completeness• Is up to date?					
9.	Methods <ul style="list-style-type: none">• Mention type of study• Details of subjects & control• Details of material• Procedure for data collection• Statistical methods employed• Mention ethical issues					
	Total Score					

Check List-V

CONTINUOUS EVALUATION OF DISSERTATION WORK BY GUIDE/CO- GUIDE

Name of the Student:

Name of the Faculty:

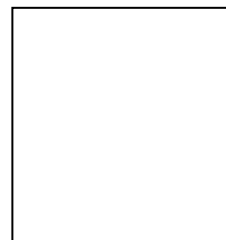
Date:

Sl. No.	Items for observation during presentation	Poor 0	Below Average 1	Average 2	Good 3	Very Good 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					
6.	Others					
	Total Score					

Proforma of Log Book to be maintained by PG Candidate in pharmacology

LOG BOOK

PERSONAL BIODATA



NAME OF THE CANDIDATE:

Date of birth of the candidate

Father's name

Year and month of registration-

Permanent address of the candidate

NAME OF THE INSTITUTE-BLDE Univ. Shri.B.M.Patil Medical College, Bijapur

Name of the P.G. Teacher-

Education qualifications of the Candidate

Sr. No.	DEGREE	INSTITUTE/UNIVERSITY	YEAR OF PASSING
1			

Service record

Sr. No.	Position	Place	From	To	Remarks
1					

Dissertation details

Name of the topic-

Co-guide if any –

Date of clearance by ethics committee-

Posting schedules

First year

Sr. No.	From	To	Place of posting	Remarks Sign of I/C
1	May 2013	Oct.2013	Dept .of Pharmacology	
2	Nov.2013	Dec.2013	Animal house	
3	Jan.2014	Feb.2014	Dept. of Medicine	
4	March2014	April2014	Dept. of Pharmacology	

Second year

Sr. No.	From	Place of posting	Remarks Sign of I/C
1	5 months	Department of Pharmacology	
2	1 month	Dept. of Paediatrics	
3	1 month	Dept. of Anaesthesia& ICU	
4	5 months	Dept. of Pharmacology	

Third year

Sr. No.	From	Place of posting	Remarks Sign of I/C
1	1 month	Dept. of Dermatology & Psychiatry	
2	Rest of the course	Department of Pharmacology	

LOG BOOK

Table – 1: Academic presentations made by the P.G. student.

Name : _____ Admission year : .

College :BLDEU's SHRI B. M. PATIL MEDICAL COLLEGE, BIJAPUR – 586103

Date	Topic	Type of Presentation – Seminar, Journal Club, short talks, UG teaching, etc.

Table – 2: Experiment conducted by the P.G. student

Name : _____ Admission year :

College: BLDEU's SHRI B. M. PATIL MEDICAL COLLEGE, BIJAPUR – 586103

Date	Topic	Long expt./short expt.	Signature of staff

CONFERENCES / WORKSHOPS ATTENDED

Sr. No.	Conference / Workshop	Date

Other activities/ Projects

Abstracts or publications


REGISTRAR
BLDE (Deemed to be University)
Vijayapura-586103. Karnataka