SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH

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

Comprising Sri DevarajUrs Medical College

[Constituent Unit of Sri DevarajUrs Educational Trust for Backward Classes (Regd.)]

TAMAKA, KOLAR-563103, KARNATAKA, INDIA

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(With effect from 2019-2020 batches)

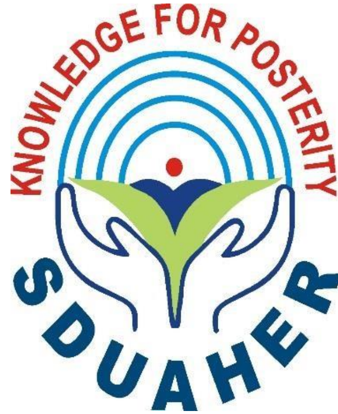
Competency Based Postgraduate Curriculum for Master of Surgery Ophthalmology

Approved as per BOM-56-2019, (Resolution No-LVI.06) Dated-20/12/2019

REGULATIONS GOVERNING

POST GRADUATE DEGREE PROGRAMMES

CURRICULUM 2019-2020



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Comprising Sri Devaraj Urs Medical College

A Deemed To Be University

Declared under section 3 of UGC, Act,1956,
MHRD GOI NO.F,9-36/2006-U.3(A), Dt.25th may 2007
Post box No.62, Tamaka, Kolar-563101, Karnataka, INDIA
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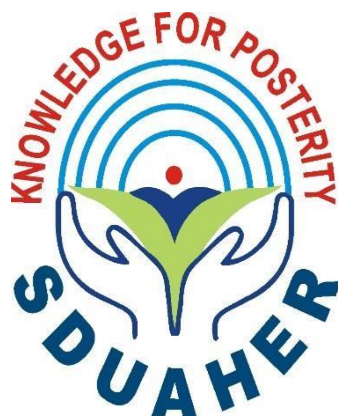
REGULATIONS AND CURRICULA
FOR
POST GRADUATE DEGREE PROGRAMMES
IN
MEDICAL SCIENCES
2019-2020



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Edition Year: 2020 **Published by SDUAHER**

VISION:

"UNIVERSITY OF EXCELLENCE - KNOWLEDGE FOR POSTERITY"

MISSION:

1. To be a global centre of excellence for Teaching, Training and Research in the field of Higher education.
2. To inculcate scientific temper, research attitude and social accountability amongst faculty and students.
3. To promote with value based education for the overall personality development and leadership qualities to serve the humanity.

OBJECTIVES:

1. To provide need based infrastructure and facilities to students to become responsible professionals with social commitment and accountability.
2. To implement effectively innovative programs in teaching learning and evaluation.
3. To impart scientific and socio cultural temperament among students to forge national identity and needs.
4. To provide instruction and training in Basic and advanced branches of learning.
5. To provide facilities for research for the advancement and dissemination of knowledge.
6. To undertake extra mural studies, consultancy, extension programmes and field outreach services for the development of society.
7. To collaborate with other Universities, Institutions of excellence and research organizations within the country and outside for the purpose of teaching, training and research.
8. To undertake need based activities for the betterment of socially and educationally backward society.

At a glance this logo is abstract, yet it contains the vital ingredients for an institution like Sri Devaraj Urs Academy of Higher Education and Research, Tamaka, Kolar.

The institution's medical background, Humanitarian values, Compassion,

Approachability, Social Commitment and the subsequent research towards the most precious thing, the human life, is the core theme.

The graphic form of a person in the centre of a bud represents the humanity. It denotes the growing process of life and its existence. And the two hands safeguarding them show the care and a sense of security. It is also capable of holding something within the vast expanse of knowledge by the University for the People's benefit. Hence, the motto "Knowledge for Posterity" is very appropriate and gives a punch in Red. The four light blue half circles (smaller to bigger) depict the unending quest for knowledge and imparting it to a wider horizon, growing higher and higher.

And finally, the whole unit is embedded in a "D" shaped graphic template as background to give it a corporate identity.

COLORS USED:

Deep Blue: Credible, Confident and Dependable. Represents Peace, Tranquility, Stability, Harmony, Trust, Security, Cleanliness and Loyalty

Light Blue: For Sky and Water (color scheme for 4 half circles)

Red: A dominant color for strengths.

Green: For Nature, Health and Generosity. It is cool quality soothes and has great healing powers

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No. SDUAHER/KLR/ADMN/1322/2020-21 Date:12/10/2020

NOTIFICATION

Sub: Regulations, curricula and syllabi of Postgraduate medical degree programmes in Preclinical, Paraclinical and clinical subjects- reg

Ref.

- **I. Proceedings of the Academic Council meetings**
- **II. Proceeding of the Board of Management meetings**
- **III. MCI notifications**
- **IV. SDUAHER notification:**

Academic Council Meetings		Board of Management Meetings	
19th	17.11.2014	34th	19.06.2015
21st	25.04.2015	36th	04.12.2015
22nd	18.11.2015	44th	23.06.2017
27th	29.04.2017	45th	09.11.2017
28th	04.11.2017	48th	20.06.2018
30th	05.05.2018	50th	22.12.2018
31st	03.11.2018	54th	06.07.2019
33rd	04.06.2019	56th	20.12.2019
34th	15.11.2019	59th	09.10.2020
36th	30.09.2020		

Agenda discussed:

- Objectives of external postings of Post Graduates
- Internal & External postings of PG's with assessment tools
- Minimum marks to be scored in PG theory examinations
- Topics to be included in Forensic medicine and toxicology in paper 4 for PG students
- Work placed based assessment for PG students
- Introduction of Assessment of AETCOM in formative/summative assessment
- Design and development of E-portfolio for all PG's
- Patient handover as common EPA for all departments
- Preparation of Question paper from question bank using software

- Coding of answer booklet by software enabled barcoding
- Development of CBME in PG programmes
- Quarterly formative assessment as an assessment tool for all PGs
- Start course in MD psychiatry
- Implement E- Portfolio of PG's
- Discontinuation of practice for 5th evaluation in PG exam
- Post graduate training programme MCI-PG Medical Education Regulations 2000, amended upto May 2018
- Approval of EPA's as competency based medical training for PG's
- Work placed based assessment as part of quarterly assessment for PG's
- PLO's for all programmes

V. MCI Notifications

- MCI Notification dated 09-12-2009, vide No.MCI.18(1)/2009-Med.55455
- No. MCI-23(1)/2014/Med/153433 Dated 28-01-2015
- MCI Guidelines 2017(CBME based)
- MCI postgraduate medical education regulations 2000 amended upto 2018
- (clause 13.2,gazette notification dated 05/04/2018)
- Basic Programme in Biomedical Research(MCI-23(1)/2019-Med./141602 dated 27-08-2019).
- MCI-12(2)/2019-Med.Misc./189334.- Dated:12th February 2020
- MCI-18(1)/2020-Med./121415.-date 16/09/2020- (District Residency Programme' (DRP)

VI. Office Memorandum No. SDUAHER / KLR/ ADMN /8071/2019- 20 Dated 22/06/2019

VII. SDUAHER / KLR/ ADMN /1571/2019-20 dated 12/09/2019

REGULATIONS FOR POST GRADUATE DEGREE PROGRAMME IN MEDICAL SCIENCES

CHAPTER- I

1. Branches of Study

1.1 Postgraduate Degree Programme
The following programmes may be pursued.

A. M.D. (Doctor of Medicine)

1. Anatomy
2. Physiology
3. Biochemistry
4. Pharmacology
5. Pathology
6. Microbiology
7. Forensic Medicine
8. Community Medicine
9. General Medicine
10. Dermatology, Venereology and Leprosy
11. Anesthesiology
12. Paediatrics
13. Radio-Diagnosis
14. Psychiatry

B. M.S. (Master of Surgery)

1. General Surgery
2. Obstetrics and Gynecology
3. Orthopedics
4. Ophthalmology
5. OTO-Rhino-Laryngology

1.2. Eligibility for Admission

1.2.1 MD / MS Degree Programme: A candidate affiliated to this academy and who has passed final year M.B.B.S. examination after pursuing a study in a medical college recognised by the Medical Council of India, from arecognised Medical College affiliated to any other Academy recognised as equivalent thereto, and has completed one year compulsory rotating internship in a teaching Institution or other Institution recognised by the Medical Council of India, and has obtained permanent registration of any State Medical Council will be eligible foradmission.

1.2.2 A Candidate seeking admission should have successfully cleared the qualifying examination – NEET (National Eligibility cum Entrance Test) conducted by NBE (National Board of Examination).

1.3. Obtaining Eligibility Certificate by the Academy before making Admission

No candidate will be admitted for any postgraduate degree programme unless the candidate has obtained and produced the eligibility certificate issued by the Academy. The candidate has to make an application to the Academy with the following documents along with the prescribed fee:

1. S.S.L.C Marks card
2. 10+2 Certificate
3. All MBBS Marks Cards
4. Internship Completion Certificate
5. Attempt / Academic certificate
6. Degree Certificate
7. Transfer Certificate
8. Migration Certificate
9. Study/Bonafide Certificate
10. Character & Conduct certificate
11. MCI Recognisized Certificate by college
12. Karnataka Medical Council/State medical council
13. MCC Allotment Letter
14. NEET Admission Ticket
15. NEET Rank card
16. Caste (SC/ST) /OBC certificate (domicile) & Income Certificate
17. Aadhar card of both candidate and parents / sponsors
18. Bond for SR Ship
19. Remaining years fee bond

NOTE: The NRI/NRI Sponsor students have to submit the documents as per the MCC/DGHS Criteria for NRI status

Candidates should obtain the Eligibility Certificate before the last date for admission as notified by the Academy.

A candidate who has been admitted to postgraduate programme should register his / her name in the Academy within a month of admission after paying the registration fee.

1.4. Intake of Students

The intake of students to each programme will be in accordance with the ordinance in this behalf.

1.5. Duration of Study

a) M.D /M.S Degree Programme

The programme of study will be for a period of 3 years consisting of 6 academic terms.

1.6. Method of training

The training of postgraduate for degree will be residency pattern 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 participate in seminars, group discussions, grand rounds, case demonstration, clinics, journal review meetings, CPC and clinical meetings. Every candidate should participate in the teaching and training programme of undergraduate students. Training includes involvement in laboratory and experimental work and research studies.

1.6.1. Teaching methodology

1.6.1.1 Includes Didactic lectures, small group discussion such as seminars, journal clubs, symposia, reviews and guest lectures for acquiring theoretical knowledge.

1.6.1.2 Bedside teaching, grand rounds, structured interactive group discussions and clinical demonstrations should be the hallmark of clinical/practical learning with appropriate emphasis on e-learning. Student should have hand-on training in performing various procedures and ability tointerpret varioustests/investigations.

1.6.1.3 Exposure to newer specialized diagnostic/therapeutic procedures concerning her/his subject should be given.

1.6.4 Self-learning tools like assignments and case-based learning should be promoted.

1.6.2. Clinical postings and Rotation of posting

Basic medical sciences students will be posted to allied and relevant clinical departments or institutions. Students working in clinical departments will be posted to basic medical sciences and allied speciality departments or institutions. It should be done as concurrent studies during the 1st year of training Similarly Inter-unit rotation in the department should be done for a period of up to one year. Rotation in appropriate related subspecialties **should not extend for a period exceeding 06 months.** Postings to other specialty departments will be during the second year.

All postgraduates' students pursuing MD/MS in broad specialities shall undergo a compulsory residential rotation of three months in District Hospital / District Health system as a part of the course curriculum. Such rotation shall take place in the 3rd or 4th or 5th semester of the postgraduates programme. This rotation shall be termed as District residency programme and the postgraduate medical student undergoing training shall be termed as a District Resident.

Satisfactory completion of the District Residency shall be an essential condition before the candidate is allowed to appear in the final examination of the respective postgraduate course. The District Residency Programme Coordinator (DRPC) shall issue certificate of satisfactory completion of DRP and report on the performance of the District Resident on a prescribed format to the concerned Medical College and the Government of State/Union Territory. No. MCI-18(1)/2020-Med./121415.—date16/09/2020

1.6.3. Clinical meetings:

Clinical meetings will be conducted within the department weekly and also inter departmental meetings will be conducted monthly to discuss uncommon/interesting cases.

1.6.4 Log book:

Each student should maintain a logbook and document day to-day activities like documentation of ward work, teaching and learning activities , clinical case discussion, procedures performed , seminars, journal clubs, symposium ,CPC meets, inter-unit/interdepartmental teaching sessions, mortality meets, workshops, CME/conferences .The Log books will be checked and assessed periodically by the faculty members imparting the training. This will in turn be evaluated/assessed by an external reviewer appointed by the Director of PG Studies biannually during the months of July and January. The log book should be preserved and presented at the time of summative examinations conducted by the Academy.

1.6.5 Research activities:

1.6.5.1 The student should know the basic concepts of research methodology plan a research project and be able to retrieve information from the library. The student should have a basic knowledge of statistics.

1.6.5.2 A postgraduate student of a postgraduate degree programme in broad specialities should present one poster presentation, read one paper at a national/state conference and publish 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 eligible to appear at the postgraduate degree examination. MCI Notification No.18(1)/2009/ medicine/55455 Dated:09-12-2009

1.6.5.3 Department should encourage e-learning activities.

1.6.6 Basic Programme in Biomedical Research:

In order to improve the research skills of post-graduate students, the Board of Governors (BoG) has recommended a uniform research methodology programme across the country, the online programme, “Basic programme in Bio-medical Research”, will be offered by ICMR-National Institute of Epidemiology (ICMR-NIE), Chennai (www.nie.gov.in). The programme will explain fundamental concepts in

Research methodology. This programme is being offered through SWAYAM programme of ministry of human resource development through SWAYAM NPTEL (http://swayam.gov.in/nc details/NPTEL)

1.6.7 Synopsis and Dissertation:

Every candidate will submit to the Registrar of the Academy in the prescribed proforma, a synopsis containing particulars of proposed dissertation work within six months from the date of commencement of the programme on or before the dates notified by the Academy. The synopsis will be sent through the properchannel.

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

Every candidate pursuing MD/MS degree programme 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 will 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 a 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 drawingconclusions.

The dissertation should be written under the following headings:

- Introduction
- Aims or Objectives of study
- Review of Literature
- Material and Methods
- Results
- Discussion
- Conclusion
- Summary
- References
- Tables
- Annexures

The written text of dissertation will be not less than 50 pages and will not exceed 150 pages excluding references, tables, questionnaires and other annexures. 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 will be certified by the guide, Head of the department and Head of the Institution.

Six hard copies of dissertation and one soft copy thus prepared will be submitted to

the Controller of Examination (CoE), six months before final examination on or before the dates notified by the Academy.

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

Guide: The academic qualification and teaching experience required for recognition by this Academy 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 four years teaching experience as Assistant Professor with at least one research publication in indexed journals gained after obtaining post graduate degree will be recognized as post graduate teachers. (No.MCI- 12(2)/2019-Med.Misc./189334.- Dated: 12th February 2020)

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 Sri Devaraj Urs Academy /Medical Council of India. The co- guide will be a recognized post graduate teacher of Sri Devaraj Urs Academy.

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 academy.

1.6.8 Journal Club:

Journal club will be conducted once a week. All the PG students are expected to attend and actively participate in discussion and enter the relevant details in the log book. Further, every candidate must make a presentation from the allotted journal(s), selected articles, at least four times a year and a total of 12 presentations in three years. The presentations would be evaluated using check lists and would carry weightage for internal assessment (See checklist - I in Chapter V). A time table with names of the student and the moderator should be announced periodically, (Quarterly).

1.6.9 Subject Seminar:

Subject seminar will be conducted once a week. All the PG students are expected to attend and actively participate in discussion and enter the relevant details in the log book, Further, every candidate must present selected topics at least four times a year and a total of 12 seminar presentations in three years. The presentations would be evaluated using check lists and would carry weightage for internal assessment (See checklist-II in Chapter V). A timetable for the subject with names of the student and the moderator should be announced periodically, (Quarterly).

1.6.10 Student Symposium:

Student Symposium as an additional inter departmental programme will be conducted periodically, once in three months. The evaluation may be similar to that described for subject seminar.

1.6.11 Ward Rounds:

Ward rounds are service or teaching rounds.

i. ***Service Rounds***: Postgraduate students and Interns will do every day for the care of the patients. Newly admitted patients should be worked up.by the PGs and presented to the seniors the following day.

ii. ***Teaching Rounds***: Every unit will have 'grand rounds' for teaching purpose.
A diary should be maintained for day to day activities by the students.
Entries of (i) and (ii) should be made in the Log book.

1.6.12 Clinico-Pathological Conference:

CPC will be conducted once in two months for all post graduate students. Presentation will be done by rotation. If cases are not available due to lack of clinical postmortems, it could be supplemented by published CPCs.

1.6.13 Inter Departmental Meetings:

These will be conducted once a month. These meetings will be attended by post graduate students and relevant entries must be made in the Log Book.

1.6.14 Teaching & Learning Skills:

Post graduate students must teach under graduate students (Eg. medical, nursing) by taking demonstrations, bed side clinics, tutorials, lectures etc.

Assessment is made using a checklist by surgery faculty as well as students. (See model checklist -III in Chapter V). Record of their participation should be documented in the Log book. Training of post graduate students in Educational Science and Technology is recommended.

Further, all postgraduate students are required to attend at least about 35 hours of didactic lecture as notified by the individual departments.

1.6.15 Entrustable Professional Activity:

EPAs are units of professional practice, defined as tasks or responsibilities to be entrusted to the unsupervised execution by a trainee once he or she has attained sufficient specific competence. EPAs are independently executable, observable, and measurable in their process and outcome, and therefore, suitable for entrustment decisions. The Entrustable professional activity (EPA) concept allows faculty to make competency-based decisions on the level of supervision required by trainees. The Academy has identified few such EPA's for all students in various degree programme. These are:

1. EPA 1: Gather a history and perform a physical examination

2. EPA 2: Prioritize a differential diagnosis following a clinical encounter
3. EPA 3: Recommend and interpret common diagnostic and screening tests
4. EPA 4: Obtain informed consent for tests and / or procedures
5. EPA 5: Recognize a patient requiring urgent or emergent care and initiate evaluation and management
6. EPA 6: Give or receive a patient handover to transition care responsibility
7. EPA 7: Undertake complete patient monitoring including the preoperative and post-operative care of the patient.
8. EPA 8: Provide basic and advanced lifesaving support services in emergency situations
9. EPA 9: Collaborate as a member of an inter-professional team
10. EPA 10: Perform general procedures of a physician
11. EPA 11: Enter and discuss orders and prescriptions
12. EPA 12: Prepare a comprehensive discharge summary.
13. EPA 13: Form clinical questions and retrieve evidence to advance patient care.

However in addition to these common EPA's individual departments are advised to develop their own EPA's.

1.7. Continuing Medical Education (CME):

Every PG student must attend at least 2 CME programes either at state/regional /zonal/national levels.

1.8. Conferences:

Attending conferences is optional. However it has to be encouraged. All students are encouraged to attend conferences (at state/national/international levels) to enable them to make paper/poster presentations, which is a mandatory requirement to fulfill before appearing for final examinations.

1.9. Attendance, Progress and Conduct:

- A candidate pursuing degree programme will 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 programme.
- Academic term of 6 months will be taken as a unit for the purpose of calculating attendance. The candidate should have 80% attendance in each academic term of 6 months.

- Every student will 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 term of the post graduate programme. Provided further, leave of any kind will not be counted as part of academic term without prejudice to minimum 80% attendance of training period every term.
- All the candidates joining the Post Graduate training programme will work as 'Full Time Residents' during the period of training and will attend not less than 80% (Eighty percent) of the imparted training during each academic term. Including assignments, full time responsibilities and participation in all facets of the education process.
- Any student who fails to complete the programme in the manner stated above will not be permitted to appear for the Academy Examinations.
- A Postgraduate student of a postgraduate degree programme would be 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 postgraduate studies so as to make him eligible to appear at the postgraduate degree examination.
  Ref: As MCI Notification dated 09-12-2009, vide No.MCI.18 (1)/2009- Med.55455 and Para No.4.

<u>Procedure for defaulters:</u>

Every department will have a committee containing Head of the department and PG guides 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.

2 Monitoring Progress of Studies:

It is essential to monitor the learning progress of each candidate through continuous appraisal and regular assessment. It not only helps teachers to evaluate students, but also students to evaluate themselves. The monitoring will be done by the staff of the department based on participation of students in various teaching / learning activities. It may be structured and assessment be done using checklists that assess various aspects. Checklists are given in Chapter V.

The learning out comes to be assessed should include:

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

a. Personal Attitudes:

The essential items are:

- Caring attitudes
- Initiative
- Organisational 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, self, peers, faculty from the unit and nurses. (Multi source feedback MSF)checklistXII

b. Acquisition of Knowledge:

The methods used comprise of

2.1 Log book: (Check List – XIII Chapter – V)

'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 must be recorded. The log book will periodically be validated by the supervisors. Some of the activities are listed. During the training period, the post graduate student should maintain a Log Book indicating various teaching / learning activities, duration of the postings/work done in Wards including super specialty, OPDs and Casualty. This should indicate the specified number of cases for clinical discussion, procedures and operations observed, assisted and performed /presented seminars and review articles from various journals in inter- unit/inter departmental teaching sessions.

The purpose of the Log Book is to:

- Help maintain a record of the work done during training,
- Enable Consultants to have direct information about the work; intervene if necessary,
- Use it to assess the experience gained periodically.

The log book will be used to aid the internal evaluation of the student.
The Log books will be checked and assessed periodically, monthly basis by guide / head of the unit/ head of the department and biannually by external reviewer.

Procedure for defaulters:
Every department will 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 will 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

2.2 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 (see Model Checklist -I, in Chapter V)

2.3 Seminars / Symposia:
The topics will 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 will be assessed using a checklist (see Model Checklist -II, Chapter V)

2.4 Clinico'-Pathological conferences:
This will 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.

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

2.6 Clinical skills
Day to Day work: Skills in outpatient and ward work will be assessed periodically. The assessment should include the candidates' sincerity and punctuality, analytical ability and communication skills (see Model Checklist -V, Chapter V). – Mini CEX (Model check list VII, Chapter V)

2.7 Clinical meetings (Clinical Presentations :) *:*
Candidates should periodically present cases to his peers and faculty members. This should be assessed using a check list (see Model checklist V, Chapter V).

2.8 Clinical and Operative skills:

The candidate will be given graded responsibility to enable learning by apprenticeship. The performance is assessed by the guide by DOPS (Model check list VI, Chapter V). Particulars are recorded by the student in the log book.

2.9 Teaching skills:

Post graduates are required to teach undergraduate medical students and paramedical students, if any *(as a part of Post graduate training)*. This performance should be based on assessment by the faculty members of the department and from feedback from the undergraduate students (See Model checklist III, Chapter V) - Microteaching Pedagogy (Model check list VIII, Chapter V)

2.10 Dissertation in the Department:

Periodic presentations must be made in the department. Initially the topic selected is to be presented before submission to the Academy for registration and again before finalization for critical evaluation and before final submission of the completed work (See Model Checklist IX & X, Chapter V)

2.11 Periodic tests:

The concerned departments will conduct quarterly tests. The final test will be held three months before the final examination. The tests may include written papers, practical's / clinical and viva voce. Records and marks obtained in such tests will be maintained by the Head of the Department and sent to the Academy, when called for.

2.12 Work diary / Log Book-

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

2.13 Records:

Monthly and quarterly reviews of records, log books and marks obtained in tests will be maintained by the Head of the Department and will be made available to the Academy, when called for.

3. ASSESSMENT:

3.1 Formative Assessment

It is essential to monitor the learning progress of each candidate through **continuous appraisal and regular assessment.** It not only helps teachers to evaluate students, but also students to evaluate themselves. The monitoring to be done by the staff of the department based on participation of students in various teaching /learning

activities. It may be structured and assessment be done using checklists that assess, various aspects. This includes assessment of patient care, procedural & academic skills, interpersonal skills, professionalism, self-directed learning and ability to practice in the system.

Checklists are given in Chapter-V

Assessment during the MS/MD training should be based on:

Assessment at end of rotation (Quarterly Postgraduate Student's Appraisal Form) by the Unit Head. The student to be assessed periodically as per categories listed in **Postgraduate Student Appraisal Form** (See Model checklist-X, Chapter V).

Multisource Feedback (MSF) – Quarterly

MSFs should be obtained quarterly from:- 2 from faculty of the unit/department; 2 from peers posted in the unit; 2 from interns,2 from staff nurses from the areas attached to the unit,2 from patient/patient relative. (Checklist XII – Chapter V)

Periodic assessment –The Quarterly tests may include written papers (theory), practical's / clinical and viva voce.

Quarterly Postgraduate Student's Appraisal Form (See Model checklist-X I, Chapter V).

- Journal based/ recent advances learning
- Patient based or Skill based learning
- Self-directed learning and teaching
- Departmental & interdepartmental learning activity
- External & Outreach activities/ Continuing Medical Education (CME)
- Attendance, Progress and Conduct

A candidate pursuing degree programme 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 postgraduateprogramme.

Academic term of 6 months will be taken as a unit for the purpose of calculating attendance. Every student will 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 term of the post graduate programme. Provided further, leave of any kind will not be counted as part of academic term without prejudice to minimum 80% attendance of training period every term.

All the candidates joining the Post Graduate training programme will work as 'Full Time Residents' during the period of training and will attend not less than 80% (Eighty percent) of the imparted training during Academic Term of 6 months including assignments, full time responsibilities and participation in all facets of the education process.
Any student who fails to complete the programme in the manner stated above will not be permitted to appear for the Academy Examinations.

A Postgraduate student of a postgraduate degree programme in broad specialities/super specialities would be 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 postgraduate studies so as to make him eligible to appear at the postgraduate degree examination.
Ref: As MCI Notification dated 09-12-2009, vide No.MCI.18 (1)/2009-Med.55455 and Para No.4.

Procedure for defaulters:

Every department should have a committee containing Head of the department and PG guides 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.

3.2 Scheme of examinations

Summative assessment

The summative examination would be carried out as per the Rules given in POSTGRADUATE MEDICAL EDUCATION REGULATIONS, 2000 and amended up to 2018. (The Clause 14 under the heading "EXAMINATION" shall be substituted in terms of Gazette Notification published on 05.04.2018).
The examination will be in three parts:

3.2.1 DISSERTATION

Every post graduate student will carry out work on an assigned research project under the guidance of a recognized Post Graduate Teacher, the result of which will be written and submitted in the form of a dissertation. Work for writing the dissertation is aimed at contributing to the development of a spirit of enquiry, besides exposing the candidate to the techniques of research, critical analysis, acquaintance with the latest advances in medical science and the manner of identifying and consulting available literature. Dissertation will be submitted at

least six months before the Theory and Clinical / Practical examination. The dissertation will be examined by a minimum of three examiners; one internal and two external examiners, who will not be the examiners for Theory and Clinical examination. A candidate will be allowed to appear for the Theory and Practical/Clinical examination only after the acceptance of the dissertation by the examiners.

3.2.2. THEORY

There will be four question papers, each of three hours duration. Each paper will consist of ten questions each question carrying 10 marks, so the total marks for each paper will be 100. Questions on recent advances maybe asked in any or all the papers. The examinations will be organised on the basis of 'Grading'or 'Marking system' to evaluate and to certify candidate's level of knowledge, skill and competence at the end of the training. The Clause 14 under the heading "EXAMINATION" shall be substituted in terms of Gazette Notification published on 05.04.2018 and the same is as under:-

Obtaining a minimum of 40% marks in each theory paper and not less than 50% cumulatively in all the four papers for degree examinations and three papers in diploma examination. Obtaining of 50% marks in Practical examination shall be mandatory for passing the examination as a whole in the said degree/diploma examination as the case may be. Obtaining a minimum of 50% marks in 'Theory' as well as 'Practical' separately will be mandatory for passing examination as a whole. The examination for MS/MD will be held at the end of 3rd academic year.

3.2.3. Clinical / Practical and viva voce Examination

Clinical examination will be conducted to test the knowledge, skills, attitude and competence of the post graduate students for undertaking independent work as a specialist/Teacher, for which post graduate students will examine a minimum one long case and two short cases.

The Oral examination will be thorough and will aim at assessing the post graduate student's knowledge and competence about the subject, investigative procedures, therapeutic technique and other aspects of the specialty, which form a part of the examination.

Assessment may include Objective Structured Clinical Examination (OSCE) Oral/Viva-voce examination needs to assess knowledge on X-rays, instrumentation, operative procedures. Due weightage should be given to Log Book Records and day to-day observation during the training.

ALLOTMENT OF MARKS

THEORY	MARKS ALLOTMENT	MAXIMUM MARKS	
PAPER-I	10 X 10	100	400
PAPER-II	10 X 10	100	
PAPER-III	10 X 10	100	
PAPER-IV	10 X 10	100	

CLINICALS/ PRACTICALS		200
VIVA VOCE	80	100
PEDAGOGY	20	
TOTAL		**700**

3.2 Examiners:

There will be at least four examiners in each subject. Out of them two will be external examiners and two will be internal examiners. The qualification and teaching experience for appointment as an examiner will be as laid down by the Medical Council of India. No person will be appointed as internal examiner in any subject unless he/she has three years' experience as recognized PG teacher in the concerned subject. For external examiners he/she should have minimum six years of experience as recognized PG teacher in the concerned subject.

3.2.4 Criteria for declaring as pass in Academy Examination:

A candidate should score minimum 40% marks in each theory paper and not less than 50% marks cumulatively in all the papers in postgraduate degree/diploma, to be declared as pass in the examinations. A candidate shall secure not less than 50% marks in each head of passing which shall include (1) Theory, (2) Practical including 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. (No. MCI-23(1)/2014/Med/153433 Dated 28-01-2015) A failed candidate may appear in any sub-sequent examination upon payment of fresh fee to the Registrar of the University.

3.2.5 Declaration of distinction:

A successful candidate passing the Academy examination in first attempt will be declared to have passed the examination with distinction, if the grand total aggregate marks are 75 percent and above. Distinction will not be awarded for candidates passing the examination in more thanone attempt.

3.2.6 Number of Candidates per day.

The maximum number of candidates for practical/clinical and viva-voce examination will be as under: MD / MS Programme: Maximum of 8 per day

4. ELIGIBILITY CRITERIA FOR APPEARING FOR EXAMINATIONS

4.1 ATTENDANCE

All the candidates joining the Post Graduate training programme will work as 'Full Time Residents' during the period of training and will attend not less than 80% (Eighty percent) of the imparted training during Academic Term of 6 months including assignments, full time responsibilities and participation in all facets of the education process.

- Every student will attend all teaching programmes 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 programme. Provided further, leave of any kind will not be counted as part of academic term without prejudice to minimum 80% attendance of training period every term.
- Any student who fails to complete the programme in the manner stated above will not be permitted to appear for the Academy Examinations.

4.2. PROGRESS AND CONDUCT

- Every student will attend symposia, seminars, conferences, journal review meetings, grand rounds, CPC, case presentation, clinics and lectures during each term 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 term of the post graduate programme. Provided further, leave of any kind will not be counted as part of academic term without prejudice to minimum 80% attendance of training period every term.

4.3. RESEARCH ACTIVITIES-PAPER/POSTER/PUBLICATIONS

- A Postgraduate student of a degree programme in broad speciality would be 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 postgraduate studies so as to make him eligible to appear at the postgraduate degree examination. Ref: As MCI Notification dated 09-12-2009, vide No.MCI.18 (1)/2009-Med.55455 and Para No.4.
- It is mandatory for all postgraduate students to undergo training in online programme in "Basic Programme in Biomedical Research" Which should be completed by the end of second semester .Not completing the programme will make them ineligible for appearing for the final academy examinations.(MCI-23(1)/2019-Med./141602 dated 27-08-2019).

4.4 DISSERTATION

Every post graduate student will carry out work on an assigned research project under the guidance of a recognised Post Graduate Teacher, the result of which will

be written and submitted in the form of a dissertation. Dissertation will be submitted at least six months before the Theory and Clinical / Practical examination. The dissertation will be examined by a minimum of three examiners; one internal and two external examiners, who will not be the examiners for Theory and Clinical examination. A candidate will be allowed to appear for the Theory and Practical/Clinical examination only after the acceptance of the dissertation by the examiners.

4.5 District Residency Programme

All postgraduates students pursuing MD/MS in broad specialties shall undergo a compulsory residential rotation of three months in District Hospital / District Health system as a part of the course curriculum. Such rotation shall take place in the 3rd or 4th or 5th semester of the postgraduates programme. This rotation shall be termed as District residency programme and the postgraduate medical student undergoing training shall be termed as a District Resident.

Satisfactory completion of the District Residency shall be an essential condition before the candidate is allowed to appear in the final examination of the respective postgraduate course. The District Residency Programme Coordinator (DRPC) shall issue certificate of satisfactory completion of DRP and report on the performance of the District Resident on a prescribed format to the concerned Medical College and the Government of State/Union Territory. No. MCI-18(1)/2020-Med./121415.—date 16/09/2020

Procedure for defaulters:

Every department should have a committee containing Head of the department and PG guides 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.

CHAPTER II

GOALS AND GENERAL OBJECTIVES OF POSTGRADUATE MEDICAL EDUCATION PROGRAM

GOALS:

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

i. Who will 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 will have mastered most of the competencies, relating to the specialty, that are required to be practiced at the secondary and the tertiary levels of the health care delivery system:
iii. Who will be aware of the contemporary advances and developments in the discipline concerned;
iv. Who will have acquired a spirit of scientific inquiry and is oriented to the principles of research methodology and epidemiology; and
v. Who will 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 will 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 lake 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 programmes, 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 concepts 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 health team engaged in health care, research or training.

STATEMENT OF THE COMPETENCIES

Keeping in view the general objectives of postgraduate training, each disciplines will aim at development of specific competencies, which will be defined and spelt out in clear terms. Each department will produce a statement and bring it to the notice of the trainees in the beginning of the programme 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 will be:

- Theoretical knowledge
- Practical/clinical Skills
- Training in Thesis.
- Attitudes, including communication.
- Training in research methodology.

Source: Medical Council of India, Regulations on Postgraduate Medical Education, 2006 and 2008.

COMPETENCY BASED POSTGRADUATE TRAINING PROGRAMME FOR M.S. OPHTHALMOLOGY

1. GOAL

A resident who has successfully completed the three –year integrated Master's course in Ophthalmology, shall be able to practice competently and safely in teaching, clinical work, research and community health care that he/she serves.

2. PROGRAMME OBJECTIVES:

The clinical post graduate training programme is intended at developing in a resident a blend of qualities that of a clinical specialist, a teacher and a researcher. This programme is organized such that a resident should possess the following qualities, knowledge and skills:

a. The resident should possess basic knowledge of the structure, function and development of the human body as related to ophthalmology, of the factors which may disturb these mechanisms and the disorders of structure and function which may result thereafter.
b. The resident should be able to practice and handle most day-to-day problems independently in Ophthalmology, should recognize the limitations of his/her own clinical knowledge and know when to seek further help.
c. The resident should understand the effects of environment on health and be familiar with the epidemiology of at least the common diseases in the field of Ophthalmology.
d. The resident should be able to integrate the preventive methods with the curative and rehabilitative measures in the comprehensive management of the disease.
e. The resident should be familiar with common eye problems occurring in rural areas and be able to deal with them effectively.
f. The resident should also be made aware of the components and working of Mobile Ophthalmic Unit.
g. The resident should be familiar with the current developments in Ophthalmic Sciences.
h. The resident should be able to plan educational programmes in Ophthalmology in association with senior colleagues and be familiar with the modern methods of teaching and evaluation.

i. The resident should be able to identify a problem for research, plan a rational approach to its solution, execute it, critically evaluate the data and present or publish the work done in the light of existing knowledge.
j. The resident should reach the conclusions by logical deduction and should be able to assess evidence both as to its reliability and relevance.
k. The resident should have basic knowledge of medico-legal aspects of medicine.
l. The resident should be familiar with counselling the patient or relatives and obtain proper informed consent to treatment and ensure compliance.

3. OPHTHALMOLOGY SPECIFIC COMPETENCIES

a. Offer to the community, the current quality of 'standard of care' in ophthalmic diagnosis as well as therapeutics, medical or surgical, in most of the common situations encountered at the level of health services.
b. Periodically self-assess his or her performance and keep abreast with ongoing advances in the field and apply the same in his/her practice.
c. Be aware of her/his own limitations to the application of the specialty in situations, which warrant referral to more qualified centres or individuals.
d. Apply research and epidemiological methods during his/her practice. The resident should be able to present or publish work done by him/her.
e. Contribute as an individual or group towards the fulfilment of National objectives with regard to prevention of blindness.
f. Effectively communicate with patients or relatives so as to educate them sufficiently and give them the full benefit of informed consent to treatment and ensure compliance.

At the end of the course, the resident should have acquired knowledge in the following:

A. COGNITIVE DOMAIN

Basic Medical Sciences:

- Attain understanding of the structure and function of the eye and its parts in health and disease.
- Attain understanding and application of knowledge of the structure and function of the parts of Central Nervous System and other parts of the body with influence or control on the structure and function of the eye.
- Attain understanding of and develop competence in executing common general laboratory procedures employed in diagnosis and research in Ophthalmology.

1. **Clinical Ophthalmology:**

   Given adequate opportunity to work on the basis of graded responsibilities in outpatients, inpatient and operation theatres on a rational basis in the clinical sections from the day of entry to the completion of the training programme, the students should be able to:

   - Acquire scientific and rational approach to the diagnosis of ophthalmic cases presented.
   - Acquire understanding of and develop inquisitiveness to investigate and establish the cause and effect of the disease.
   - To manage and treat all types of Ophthalmic cases.
   - To competently handle and execute safely all routine surgical procedures on lens, glaucoma, lid, sac, adnexa, retina and muscle anomalies.
   - To competently handle all Ophthalmic medical and surgical emergencies.
   - To be familiar with micro-surgery and special surgical techniques.
   - To demonstrate the knowledge of the pharmacological (including toxic) aspects of drugs used in ophthalmic practice and drugs commonly used in general diseases affecting the eyes.

2. **Refraction**

   - Acquire competence in assessment of refractive errors and prescription of glasses for all types of refraction problems.
   - Acquire basic knowledge of manufacture and fitting of glasses and competence of judging the accuracy and defects of the dispensed glasses.

3. **Ophthalmic super-specialties:**

   Given an opportunity to work on a rotational basis in various special clinics of sub-specialties of ophthalmology, if possible, the resident should be able to:

   - Examine, diagnose and demonstrate understanding of management of the problems of neuro-ophthalmology and refer appropriate cases to neurology and neuro-surgery.
   - Examine, diagnose and demonstrate the understanding of management (medical and surgical) of complicated problems in the field of (a) lens, (b) glaucoma, c) cornea, (d) retina, (e) paediatric ophthalmology, (f) oculoplasty,
     (g) uvea, and (h) genetic problems in ophthalmology.
   - To demonstrate the understanding of manufacture and competence in prescription and dispensing of contact lenses and ocular prosthesis.

4. Ophthalmic pathological / microbiological / biochemical sciences

Be able to interpret the diagnosis in correlation with the clinical data and routine materials received in such cases.

5. Community Ophthalmology

Eye camps may be conducted where the residents are posted for imparting training according to a set methodology. The community and school surveys may also be conducted by the residents.

They are given an opportunity to participate in surveys and eye camps. They should be able to guide rehabilitation workers in the organisation and training of the blinds in art of daily living and in the vocational training of the blind leading to gainful employment.

6. Research:

- Recognise a research problem.
- State the objectives in terms of what is expected to be achieved in the end.
- Plan a rational approach with appropriate controls with full awareness of the statistical validity of the size of the material.
- Spell out the methodology and carry out most of the technical procedures required for the study.
- Accurately and objectively record on systematic lines results and observation made.
- Analyse the data with the aid of an appropriate statistical analysis.
- Interpret the observations in the light of existing knowledge and highlight in what ways the study has advanced existing knowledge on the subject and what further remains to be done.
- Write a dissertation in accordance with the prescribed instructions.
- Write at least one scientific paper as expected of International Standards from the material of this dissertation.

B. AFFECTIVE DOMAIN

- Should be able to function as a part of a team, develop an attitude of cooperation with colleagues, and interact with the patient and the clinician or other colleagues to provide the best possible diagnosis or opinion.
- Always adopt ethical principles and maintain proper etiquette in dealings with patients, relatives and other health personnel and to respect the rights of the patient including the right to information and second opinion.
- Develop communication skills to word reports and professional opinion as well as to interact with patients, relatives, peers and paramedical staff, and for effective teaching.

C. PSYCHOMOTOR DOMAIN

At the end of the course, the student should acquire following clinical skills:

Essential diagnostic skills:

I. Examination techniques along with interpretation

1. Slit lamp Examination
   - Diffuse examination
   - Focal examination
   - Retro illumination – direct and indirect
   - Sclerotic scatter
   - Specular reflection
   - Staining modalities and interpretation
2. Fundus evaluation
   - Direct Ophthalmoscopy –distant direct, media assessment, use of filters provided
   - Indirect ophthalmoscopy –scleral depression, use of filters provided
   - Fundus drawing capability
   - 3-mirror examination of the fundus
   - 78-D/90-D/60-D examination
   - Amsler's charting

II. Basic investigations along with their interpretation

1. Tonometry – Applanation / Indentation / Non-contact
2. Gonioscopy
   - Single mirror gonioscope
   - Gonioprism
   - Grading of the anterior chamber angle
   - Testing for occludability
   - Indentation gonioscopy
3. Tear/ Lacrimal function tests
   - Tear meniscus evaluation
   - Schirmer test
   - Tear film break up time
   - Staining- fluorescein and Rose Bengal
   - Syringing
   - Jone's dye test
   - Dacryocystography
4. Corneal ulcer
   - Corneal scraping and cauterization

- Smear preparation and interpretation (Gram's stain / KOH)
- Media inoculation
- Keratometry - performance and interpretation
- Pachymetry
- Corneal topography - if available

5. Color Vision evaluation
   - Ishihara pseudo isochromatic plates
   - Other tests – if available
     a. Farnsworth - Munsell 100 - hue or 15 - hue tests
     b. Holmgren's wools
     c. Edridge -Green lantern
6. Refraction
   - Retinoscopy – Streak/ Priestley Smith
   - Use of Jackson's cross-cylinder
   - Subjective and objective refraction
   - Autorefractometry
   - Prescription of glasses
7. Diagnosis and assessment of Squint
   - Ocular position and motility examination
   - Synoptophore usage
   - Hess chart / Lees screen usage
   - Diplopia charting
   - Assessment of strabismus
     a. Cover, uncover and alternate cover test
     b. Use of Prisms bars or free prism
     c. Use of Bagolini's striated glasses / red filters /Maddox rod
     d. Use of Worth's four dot test
   - Diagnosis and treatment of Amblyopia
   - Assessment of convergence, accommodation, stereopsis, suppression
8. Exophthalmometry
   Usage of Hertel's / Luedde's exophthalmometer - proptosis measurement
9. Contact lenses
   - Fitting and assessment of RGP and soft lenses
   - Subjective verification of over refraction
   - Complications arising of contact lens use
   - Educating the patient regarding CL usage and imparting relevant knowledge of the complications arising there on
10. Low Vision Aids

- Knowledge of basic optical devices available and relative advantages and disadvantages of each.
- The basics of fitting with knowledge of availability & cost

III. The post graduate must be well versed with the following investigative modalities although the student may or may not perform it individually. But, she/he should be able to interpret results of the following tests:

1. Fundus photography
2. Fluorescein angiography
3. Ophthalmic ultrasound A-scan / B scan
4. Automated perimetry for glaucoma and neurological lesions
5. Radiological tests: X rays – Antero posterior/ Lateral view/ PNS (Water's view) / Optic canal views
6. Localisation of intra – ocular and intra-orbital foreign bodies
7. Ultrasonography, Computed tomography, Magnetic resonance imaging Scans
8. Optical Coherence Tomography and Ultrasound Bio microscope
9. Electroretinogram, Electro oculogram, Visual Evoked Potential
10. Dacryocystogram and carotid angiogram

IV. Minor surgical procedures – Must know and perform independently

1. Conjunctival and corneal foreign body removal on the slit lamp
2. Chalazion incision and curettage
3. Pterygium excision
4. Biopsy of small lid tumours
5. Suture removal- skin/conjunctival/corneal/ corneoscleral
6. Tarsorrhaphy
7. Subconjunctival injection
8. Retro bulbar, peribulbar anaesthesia
9. Posterior Sub-Tenon's injections
10. Artificial eye fitting

V. Surgical procedures

PROCEDURE	**FIRST YEAR**				**SECOND YEAR**				**THIRD YEAR**			
	I	**II**	**III**	**IV**	**V**	**VI**	**VII**	**VIII**	**IX**	**X**	**XI**	**XII**
1. Anaesthesia												
i. Retrobulbar anaesthesia	O	A	PA	PI	PI	PI	PI	PI	PI	PI	PI	PI
ii. Peribulbar anaesthesia	O	A	PA	PI	PI	PI	PI	PI	PI	PI	PI	PI
iii. Facial blocks	O	A	PA	PI	PI	PI	PI	PI	PI	PI	PI	PI
iv. Frontal blocks	O	A	PA	PI	PI	PI	PI	PI	PI	PI	PI	PI
v. Infra orbital blocks	O	A	PA	PI	PI	PI	PI	PI	PI	PI	PI	PI
vi. Blocks for sac surgery	O	A	PA	PI	PI	PI	PI	PI	PI	PI	PI	PI

2. Lid surgery:												
i. Tarsorrhaphy	O	O	O	O	A	A	A	PA	PI	PI	PI	PI
ii. Ectropion and entropion procedures	O	O	O	O	A	A	A	PA	PA	PA	PA	PA
iii. Ptosis surgery	O	O	O	O	A	A	A	PA	PA	PA	PA	PA
iv. Lid repair following trauma	O	A	PA	PI	PI	PI	PI	PI	PI	PI	PI	PI
v. Surgical excision of lid tumors.	O	O	O	O	O	O	O	A	A	A	A	A
vi. Epilation, electrolysis	O	A	PA	PI	PI	PI	PI	PI	PI	PI	PI	PI
vii. Cryotherapy	O	O	A	A	A	PA	PA	PA	P	PA	PA	PA
3. Destructive procedures:												
i. Evisceration with /without implant	O	O	O	O	A	A	A	PA	PA	PA	PA	PA
ii. Enucleation with / without implant	O	A	PA	PI	PI	PI	PI	PI	PI	PI	PI	PI
4. Sac surgery												
i. Dacryocystectomy	O	O	A	A	A	PA	PA	PA	PI	PI	PI	PI
ii. Dacryocystorhinostomy	O	O	A	A	A	PA	PA	PA	PA	PA	PA	PA
iii. Probing for congenital obstruction of nasolacrimal duct	O	O	O	O	O	A	A	A	A	A	A	A
5. Extraocular muscle surgery Recession and resection procedures on the horizontal recti	O	O	O	O	A	A	A	A	A	A	A	A
6. Cataract surgery												
i. Standard ECCE with or without IOL implantation.	O	A	PA	PA	PI	PI	PI	PI	PI	PI	PI	PI
ii. Small incision ECCE with or without IOL implantation	O	O	A	A	PA	PA	PA	PI	PI	PI	PI	PI
iii. Phacoemulsification	O	O	O	O	A	A	A	PA	PA	PA	PA	PI
iv. Secondary IOL implantation	O	O	O	O	A	A	A	PA	PA	PA	PA	PI
7. Retinal surgery												
i.________Assist in vitrectomy and scleral buckling.	O	O	O	O	A	A	A	A	A	A	A	A
ii. Intra-vitreal and intra-cameral (anterior chamber) injection	O	O	O	O	A	A	A	A	PA	PA	PA	PI
8. Orbit surgery												

i. Anterior orbitotomy	O	O	O	O	A	A	A	A	A	A	A	A
ii. Lateral orbitotomy for tumours	O	O	O	O	A	A	A	A	A	A	A	A
iii. Incision and drainage via anterior orbitotomy for abscess	O	O	O	O	A	A	A	A	A	A	A	A
iv. Exenteration	O	O	O	O	O	O	A	A	A	A	A	A
v. Fine needle aspiration biopsy of orbital disease	O	O	O	O	A	A	A	A	A	A	A	A
9. Cornea												
i. Penetrating keratoplasty	O	O	O	O	A	A	A	A	PA	PA	PA	PA
ii. Lamellar keratectomy	O	O	O	O	A	A	A	A	PA	PA	PA	PA
iii. Repair of corneo - scleral perforations	O	O	O	O	A	A	A	A	PA	PA	PA	PA
iv. Application of glue and bandage contact lens	O	O	O	O	A	A	PA	PA	PI	PI	PI	PI
v. Corneal suture removal	O	O	O	O	A	A	PA	PA	PI	PI	PI	PI
10. Glaucoma surgery												
i. Trabeculectomy	O	O	O	O	A	A	A	A	PA	PA	PA	PA
ii. Trabeculectomy with valve implant	O	O	O	O	A	A	A	A	A	A	A	A
iii. Goniotomy	O	O	O	O	O	O	O	O	O	O	O	O
iv. Cyclocryotherapy and other cyclodestructive procedures	O	O	O	O	A	A	PA	PA	PA	PA	PA	PA
11. Surface ocular procedures												
i. Pterygium excision with bare sclera	O	O	O	A	A	PA	PA	PI	PI	PI	PI	PI
ii. Pterygium excision with Conjunctival grafting	O	O	O	A	A	A	PA	PA	PI	PI	PI	PI
iii. Biopsy of Cornea and conjunctiva	O	O	O	A	A	A	A	A	A	A	A	A
iv. Conjunctival cyst excision	O	O	O	A	A	A	PA	PA	PI	PI	PI	PI
12. Combined surgery (cataract surgery with glaucoma surgery)	O	O	O	O	A	A	A	A	PA	PA	PA	PA
13. Anterior chamber wash (hyphema / post cataract surgery)	O	O	O	O	A	A	A	PA	PA	PI	PI	PI

14. Laser procedures												
i. Yag Capsulotomy	O	O	O	A	A	A	PA	PA	PI	PI	PI	PI
ii. Laser iridotomy	O	O	O	A	A	A	PA	PA	PA	PA	PI	PI
iii. Focal and panretinal photocoagulation	O	O	O	O	A	A	A	A	PA	PA	PA	PA

The resident is provided with an opportunity to perform operations both extra- ocular and intra-ocular with the assistance of the senior residents and/or under the direct supervision of a faculty member. The resident is provided with an opportunity to learn special and complex operations by assisting the senior resident or the faculty in operations of cases of the specialty and be responsible for the post- operative care of these cases.

In first phase, the resident is given training in preparations of cases for operation, pre-medication and regional anesthetic blocks. In the next phase, the resident assists the operating surgeon during the operations. In the third phase, the resident operates independently assisted by senior residents or a faculty member. She/he is required to be proficient in some operations and show familiarity with others.

LIST OF ESSENTIAL SURGICAL PROCEDURES

Sl No	SURGICAL SKILLS		O	A	PA	PI
1	**Anaesthesia**	Peribulbar	20	25	25	25
		Atkinson	10	5	5	5
		Van Lint & modifications	10	5	5	5
		Frontal block	5	-	2	-
		Infraorbital block	5	-	1	-
2	**Lid Surgery**	Tarsorrhaphy	10	5	5	10
		Ectropion and entropion procedures	10	3	2	-
		Ptosis surgery	10	3	1	-
		Lid repair following trauma	10	10	5	10
		Surgical excision of lid tumors	5	2	-	-
		Epilation	5	-	-	10
		Cryotherapy	3	1	1	-
3	**Destructive procedures**	Evisceration with or without implant	2	1	1	1
		Enucleation with or without implant	2	2	5	5
4	**Sac surgery**	Dacryocystectomy	5	3	5	5
		Dacryocystorhinostomy	3	2	2	-
		Probing for congenital obstruction of nasolacrimal duct	2	1	-	-

5	**Extraocular muscle surgery** – Recession and resection procedures on the horizontal recti		4	2	-	-
6	**Cataract surgery**	Standard ECCE with or without IOL implantation	5	5	1	2
		Small incision ECCE with or without IOL	10	15	25	25
		Phacoemulsification	10	15	10	2
		Secondary IOL implantation	10	10	5	2
7	**Retinal surgery**	Assist in external procedures such as buckling.	2	1	-	-
		Prophylactic cryotherapy	2	1	-	-
8	**Orbit surgery**	i. Anterior orbitotomy	1	1	-	-
		ii. Lateral orbitotomy for tumours	1	-	-	-
		iii. Incision and drainage via anterior orbitotomy for	1	-	-	-
		iv. Exenteration	1	-	-	-
		v. Fine needle aspiration biopsy of orbital disease	1	-	-	-
9	**Vitrectomy**	i. Intra vitreal and intracameral injections	3	2	1	1
		ii. Automated vitrectomy	2	1	-	-
10	**Keratoplasty**	i. Penetrating keratoplasty	2	1	-	-
		ii. Lamellar keratectomy	2	1	-	-
11	**Glaucoma surgery**	i. Trabeculectomy	5	2	1	-
		ii. Trabeculectomy with GDD	3	1	-	-
		iii. Goniotomy	2	-	-	-
		iv. Cyclocryotherapy and other cyclodestructive	2	1	1	-
12	**Surface ocular procedures**	i. Pterygium excision with bare sclera	5	5	10	5
		ii. Pterygium excision with Conjunctival grafting	5	5	5	3
		iii. Pterygium excision with Amniotic membrane	5	5	5	2
		iv. Biopsy of Cornea and conjunctiva	5	1	-	-
13	**Combined surgery (cataract surgery with glaucoma surgery)**		5	1	1	-
14	**Anterior chamber wash (hyphaema / post cataract surgery)**		3	1	1	3
15	**Laser procedure**	i. Yag Capsulotomy	10	5	5	5
		ii. Laser iridotomy	10	5	5	3
		iii. Focal and panretinal photocoagulation	10	5	2	-

LIST OF ESSENTIAL OUT PATIENT DEPARTMENT PROCEDURES

Sl No	PROCEDURES	O	A	PA	PI
1	Manual diagnostic procedures such as syringing, corneal scraping, conjunctival swab collection, conjunctival scraping etc.	5	5	5	10
2	Conjunctival & corneal foreign body removal on the slit lamp	15	5	5	10
3	Chalazion incision and curettage	10	5	5	10
4	Biopsy of small lid and tumours	5	2	-	-
5	Suture removal skin, conjunctival, corneal, and corneoscleral	10	5	5	5
6	Subconjunctival injection	15	10	5	10
7	Posterior Sub- Tenon's injections	10	5	5	5
8	Artificial eye fitting	3	1	1	-
9	Laser capsulotomy	10	5	5	5
10	Laser iridotomy	10	5	5	3
11	Laser trabeculoplasty	10	5	2	-
12	Panretinal photocoagulation	10	5	2	-
13	Focal photocoagulation	10	5	2	-

The procedures that the resident should have:
O = Washed and Observed
A = Assisted the operating surgeon PA =
Performed with Assistance
PI = Performed Independently

SYLLABUS

These are only broad guidelines and are illustrative, there may be overlap between sections.

I. Basic Sciences:

1. Orbital and ocular anatomy
   - i. Gross anatomy
   - ii. Histology
   - iii. Embryology
2. Ocular Physiology
3. Ocular Pathology
4. Ocular Biochemistry: General biochemistry, biochemistry applicable to ocular function
5. Ocular Microbiology: General Microbiology, specific microbiology applicable

to the eye

6. Immunology with particular reference to ocular immunology
7. Genetics in ophthalmology
8. Community Eye Health

II. Optics

a. Basic physics of optics
b. Applied ophthalmic optics
c. Applied optics including optical devices
d. Disorders of Refraction

III. Clinical Ophthalmology

a. Disorders of the lacrimal system
b. Disorders of the Conjunctiva
c. Disorders of the Sclera
d. Disorders of the lids
e. Disorders of the Cornea
f. Disorders of the Uveal Tract
g. Disorders of the Lens
h. Disorders of the Retina
i. Disorders of the Optic Nerve and Visual Pathway
j. Disorders of the Orbit
k. Glaucoma
l. Neuro-ophthalmology
m. Paediatric ophthalmology
n. Ocular involvement in systemic disease
o. Immune ocular disorders
p. Strabismus and Amblyopia
q. Ocular oncology

YEAR - WISE STRUCTURED TRAINING SCHEDULE

FIRST YEAR:

1. **Theoretical knowledge**
   a. Basic sciences should be addressed during this period.
   b. It is useful to have an internal examination of the basic sciences at the end of the first year, which will decide appearance at the final examination.
   c. Clinical ophthalmology.
2. **Clinical examination and diagnostics**
   a. The basics of history taking, order and correct methods of examination and recording have to be learnt during this time.
   b. Clinical and surgical decision making is encouraged under supervision.
3. **OPD Procedures:** Refraction and spectacle correction

a. Retinoscopy – undilated & dilated
b. Subjective correction
c. Verification of spectacle
d. Use of Lensometer
e. Use of Auto-refractometer
f. Duochrome test

4. Contact lens fitting

a. Basics
b. Fitting procedures
c. Complications

5. Speciality Clinic OPD Procedures

i) Cornea Clinic

a) Fluroscein staining
b) Corneal FB removal
c) Scraping of corneal ulcers
d) Slit lamp examination.

ii) Glaucoma Clinic

a) Recording of IOP –Schiotz and applanation
b) Visual field testing –Humprey
c) Optic disc evaluation

iii) Retina Clinic

a) Direct and indirect ophthalmoscopic examination.

iv) Cataract and IOL Clinic

a) A-scan biometry
b) Cataract workup

v) Squint Clinic

a) Evaluation of squint
b) Use of Synaptophore

vi) Oculoplasty

a) Lacrimal syringing
b) Dry eye evaluation tests

vii) OT Procedure

Minor:

a) Chalazion I & C
b) I & D of lid abscess
c) Epilation
d) I & D of Lacrimal abscess

Major:

a) Assisting extraocular surgeries like pterygium excision, squint correction, DCT, DCR, Enucleation etc.
b) Step by step learning of extracapsular cataract extraction, manual SICS etc.

SECOND YEAR

1. **Theoretical Knowledge:**
   a. Here stress will be laid on clinical ophthalmology
2. **Clinical examination and diagnostics:** The resident is encouraged to take diagnostic investigational and therapeutic decisions on his / own. He / she should be able to manage most of the common problems that arise without guidance. However, the degree of freedom allowed in decision making is left to the confidence of the teacher in the student's abilities. It is to be encouraged. May require guidance for more complex cases.
3. **Diagnostics**
   The resident should be conversant and at ease with most if not all the diagnostic procedures outlined in bold. Other procedures are optional skills if facility is available in the department. This is particularly so for the Master's candidate. However, as far as possible, it is advisable to make all such facility available in the department.
4. **OPD Procedures:**
   a. Independently giving spectacle correction in complicated cases like astigmatism, pseudophakes etc.
   b. Independently giving contact lens fitting and managing CL complications.
5. **Speciality Clinics:**
   a. Cornea Clinic: evaluation of donor's cornea for keratoplasty.
   b. Glaucoma Clinic: assisting in interpretation of visual field charts and independently recording IOP.
   c. Retina Clinic: assisting in doing Fluorescein angiography, in reporting B-scan reports, independently doing indirect Ophthalmoscopy and evaluation of macula by +90D.
   d. Cataract and IOL Clinic: independently doing A –scan biometry.
   e. Squint Clinic: Squint evaluation and synaptophore using independently.
   f. Oculoplasty: independently doing dry eye evaluation and lacrimal syringing.
   g. Contact lens prescribing independently.
6. **OT Procedures:**
   a) Minor: Chalazion I & C
      Epilation
      Corneal foreign body removal I
      & D lacrimal abscess.
      Assisting Ophthalmic emergencies – corneal tear, lid tear repair.
   b) Major:
      - independently giving local anaesthetic injection –peribulbar, facial, retrobulbar.

- All steps of extracapsular cataract extraction independently, small incision cataract surgery with PC IOL implantation surgeries under supervision.
- Assisting glaucoma surgeries, DCR, Vitreo retinal surgeries.
- Conducting DCT independently
- Conducting donor eye ball collection and grading independently, doing evisceration independently.

7. Conferences and workshops

The resident should attend one or two regional workshops and one national conference if possible. Presentation of a free paper at these venues is to be encouraged.

THIRD YEAR

1. Theoretical knowledge:

Should be thorough with basic clinical ophthalmology with extensive and intensive reading.

2. Clinical examination and diagnostics

Should be conversant with all aspects of clinical examination and decision making. Independent decision making and investigational and management freedom should be given at this stage for the more usual situations. However, complex cases could be discussed with consultant and degree of freedom of decision making is left to the consultant's discretion.

3. OPD Procedures:

a. Independently spectacle prescription.
b. Independently diagnose and treatment of ophthalmic medical procedures.
c. Active participation in presenting all complicated cases during teaching programmes.

4. Specialty Clinics:

a) Independently managing specialty clinic cases and investigations.
b) Independently doing fluorescein angiography, B – Scan procedures.
c) Assisting laser deliveries in retina clinic following up squint cases, doing occlusion therapy.

5. OT Procedures:

a) Minor:
- Independently doing all minor procedures, Pterygium excision, assisting for conjunctival autograft for pterygium surgeries.
- Doing Cyclocryo therapy for deserving cases.
- Assisting for Phaco-surgeries, Scleral fixation of IOLs.

b) Major: Independently doing cataract surgeries, assisting vitreo retinal surgeries.

6. Conferences and workshops

The resident by this time should have attended at least one national conference. He / she should be given time off to attend regional workshops and conferences particularly those dealing with the state of art.

7. Rotation and Posting in other Department

In institutions where sub-specialities are not being usually performed, (eg. VR surgery, orbit surgery etc.), residents could be deputed for a month or so in institutions in which these specialities are highly developed. However, posting to these allied specialties would depend upon the head of department's discretion. The total duration of posting should not exceed 2 months.

TEACHING LEARNING METHODOLOGY

A. TEACHING METHODOLOGY

Didactic lectures, small group discussion such as seminars, journal clubs, symposia, reviews and guest lectures should get priority for theoretical knowledge. Bedside teaching, grand rounds, structured interactive group discussions and clinical demonstrations should be the hallmark of clinical/practical learning with appropriate emphasis on e-learning. Student should have hand-on training in performing various procedures and ability to interpret various tests/investigations. Exposure to newer specialized diagnostic/therapeutic procedures concerning her/his subject should be given. Self-learning tools like assignments and case-based learning may be promoted.

The following methods are to be used to facilitate learning by and training of residents:

1. **Seminar**:

   Recommended to be held once a week. All the residents are expected to attend and actively participate in discussion and enter the relevant details in the log book. Further, every candidate must present selected topics at least 4 times a year and a total of 12 seminar presentations in 3 years. The presentations would be evaluated using check lists and would carry weightage for internal assessment.

2. **Symposium:** Seminars could be individual presentations or a continuum (large topic) with many post graduate students participating.

3. **Journal Club:**

   Recommended to be held once a week. All the residents are expected to attend and actively participate in discussion and enter the relevant details in the log book. Further, every candidate must make a presentation from the allotted journal(s), selected articles (from indexed journals in that subject over a 6 months' period), at least 4 times a year and a total of 12 presentations in 3 years

which shall be evaluated using a checklist. The resident should first present the journal summaries to the senior residents, who are expected to show their understanding of the aspects covered in the article and clarify any of the points raised in the article, offer criticisms and evaluate the article in the light of known literature.

4. **Clinical Case discussion**

Bedside discussion during ward rounds and outpatient teaching take their toll with patient management. This could range from 1-2 hours held at least once a week. Every effort should be made to include a variety of cases over three years with multiple repetitions. Consultant case presentation is another approach which should be encouraged as it aids in solving complex problems and also is forum for discussion of interesting cases.

Case discussions on the patient's records written by the student is to be encouraged as it helps exercise the student's diagnostic and decision making skills. It also helps the consultant in critical evaluation of the student's progress academically.

Department should encourage e-learning activities.

6 per week

1. Monday: Seminar – 52 per year
2. Tuesday: DOPS – 52 per year
3. Wednesday: Mini CEX – 52 per year
4. Thursday: Case Based Discussion – 52 per year
5. Friday: Journal club – 52 per year
6. Saturday: Didactic Lecture – 35 per year

Day	TLE	1st week	2nd week	3rd week	4th week
Monday	Seminar	1st & 2nd year PG	1st & 2nd year PG	1st & 3rd year PG	Small group discussion
Tuesday	DOPS	2nd year PG	3rd year PG	Small group discussion	1st year PG
Wednesday	Mini CEX	3rd year PG	Small group discussion	1st year PG	2nd year PG
Thursday	Case Based Discussion	Small group discussion	1st year PG	2nd year PG	3rd year PG
Friday	Journal club	1st year PG	2nd year PG	3rd year PG	Small group discussion
Saturday	Didactic Lecture				

5. **Ward Rounds:**

Ward rounds may be service or teaching rounds.

Service Rounds: Residents and Interns should do every day for the care of the patients. Newly admitted patients should be worked up by the residents and presented to the seniors the following day.

Teaching Rounds**:** Every unit should have ***'grand rounds'*** for teaching and enhancing the clinical reasoning skills. A diary should be maintained for day to day activities by the residents. Each resident is allotted beds in the in-patient section depending upon the total bed capacity and the number of residents to provide an opportunity to work with increasing responsibility according to seniority.

6. **Clinico -Pathological Conference:**

Recommended once a month for all residents, should be a multidisciplinary case study or supplemented by published CPCs of an interesting case, to train the resident 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.

7. **Inter Departmental Meetings:**

Strongly recommended, at least once a week. These meetings should be attended by residents and relevant entries must be made in the Log Book.

8. **Teaching & Learning Skills:**

Residents must teach graduates by taking, bed side clinics, demonstrations tutorials, lectures etc. Further, all residents are required to attend at least about 35 hours of didactic lecture as notified by the individual departments

9. **Continuing Medical Education (CME)**

Recommended that at least 2 state level CME programmes should be attended by each resident in 3 years.

10. **Conferences**

All residents must be encouraged to attend conferences to enable them to make paper/poster presentations, which is a mandatory requirement to fulfil before appearing for final examinations.

11. **Clinical postings and Rotation of posting**

The residents are posted in the following subspecialty clinics:

- Refractive Clinic
- Anterior segment and cataract
- Glaucoma
- Oculoplastics
- Retina and Uvea
- Cornea, Contact lens and low vision
- Neuro ophthalmology

- Paediatric ophthalmology and strabismus

– Posted to the department of Anatomy to acquire knowledge of the basic medical sciences –1st year Residents for 1month

– Second year residents are posted to SICU to provide care for ill patients who require surgery or recovering from a surgery and learn the monitoring techniques

– Allied speciality departments/ Institutions – second year residents are posted to Narayana Nethralaya or Sankara Eye Hospital for one month duration to enrich their knowledge and skills about **"Advanced diagnostic and therapeutic procedures"**

OBJECTIVES FOR EXTERNAL POSTINGS

a. CORNEA CLINIC: - 1 WEEK

- To observe various types of penetrating and lamellar keratoplasty procedures.
- To observe combined procedures of keratoplasty and cataract Surgeries.
- To learn and interpret specular microscopy
- Observe & interpret Corneal topography.

The students should be assessed for

- Learning the steps of penetrating and lamellar keratoplasty procedures by OSCE
- Interpretation of specular microscopy & Corneal topography by Short essay questions
- Short case assessment

b. GLAUCOMA CLINIC: - 3 DAYS

- To learn HRT (Heidelberg retinal tomographic) Technique and report the findings.
- Observe ALT (Argon laser trabeculoplasty) techniques.
- Observe laser PI (Peripheral iridotomy) procedures
- Interpret visual fields in complicated cases.
- To learn management of secondary glaucomas like neovascular glaucoma & malignant glaucoma.
-

The residents should be assessed for

- Reporting on HRT technique by DOPS
- Learning procedure of ALT &PI - by short essay questions
- Interpretation of visual field reports in complicated cases by Case based discussion & Evaluation.

c. RETINA CLINIC: - 1 WEEK

- To observe and learn the management of Retinal detachment.

- To learn steps and management of Vitrectomy procedures.
- To learn the technique and reporting of OCT (Optical Coherence Tomography) images.
- To observe PDT (Photodynamic therapy) & TTT (Transpupillary Thermal Therapy).
- To observe macular surgeries.

The residents should be assessed for

- Learning various types of RD & macular surgeries by Case based discussion & evaluation
- Learning steps of vitrectomy procedures by OSCE
- Interpretation of OCT images by OSCE

d. OCULOPLASTY CLINIC: - 3DAYS

- To observe Orbitotomy and different types of ptosis surgeries.
- To learn management of complicated cases of lid deformities.
- To observe the application of botulinum toxin injection.

The residents should be assessed for

- Learning various types of ptosis & orbitotomy surgeries by case based discussion & evaluation.
- Learning management of complicated cases of lid deformities by short essay questions.
- Learning procedure of botulinum injection by OSCE

e. NEURO –OPHTHALMOLOGY & SQUINT: - 3DAYS

- To learn clinical presentation of various nerve palsies and their management.
- To interpret electrophysiological tests like VEP, ERG & EOG
- To observe management of complicated squint.

The residents should be assessed for

- Interpretation of VEP, ERG & EOG by OSCE - by Case based discussion & Evaluation
- Observing Squint surgeries by patient management problems and short case assessment.

f. CONTANCT LENS CLINIC: - 3DAYS

- To practice fitting of various types of contact lenses and management of complications
- To understand the uses of contact lenses, recent advances of contact lenses therapy

- To understand the principles of contact lens fitting in Keratoconus & astigmatism.

The residents should be assessed for

- Knowing contact lens fitting procedures in routine & complicated cases by OSCE
  Short case management
  Inter -unit rotation in the department –once in 6 months

12. Clinical meetings

There should be intra and interdepartmental meetings for discussing the uncommon or interesting cases involving multiple departments.

13. Research activities

i. The resident should know the basic concepts of research methodology, plan a research project, be able to retrieve information from the library and also basic knowledge of statistics.

ii. A Resident of a postgraduate degree course in broad specialities/super specialities would be 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 postgraduate studies so as to make him eligible to appear at the postgraduate degree examination.

iii. Department should encourage e-learning activities.

14. Basic Course in Biomedical Research

In order to improve the research skills of post-graduate students, the board of Governors (BoG) has recommended a uniform research methodology course across the country ,The online course, “Basic course in Bio-medical Research”, will be offered by ICMR – National Institute of Epidemiology (ICMR-NIE), Chennai (www.nie.gov.in). The course will explain fundamental concepts in research methodology. This courses is being offered through SWAYAM program of ministry of human resource development through SWAYAM NPTEL (http://swayam.gov.in/nc details/NPTEL)

15. Synopsis and Dissertation

Every candidate shall submit to the Registrar 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.

Every candidate pursuing MD/MS degree course is required to carry out work on a selected research project under the guidance of a recognised 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 resident in research methods and techniques. It includes identification of a problem, formulation of a hypothesis, search and review of literature, getting acquainted with recent advances, designing of a research study, collection of data, critical analysis, comparison of results and drawing conclusions.

The dissertation should be written under the following headings:

a. Introduction
b. Aims or Objectives of study
c. Review of Literature
d. Material and Methods
e. Results
f. Discussion
g. Conclusion
h. Summary
i. References
j. Tables
k. Annexures

The written text of dissertation shall be not less than 50 pages and shall not exceed 150 pages excluding references, tables, questionnaires and other annexures. 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.

Six hard copies of dissertation and one soft copy thus prepared shall be submitted to the Registrar (Evaluation), 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 recognised 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 recognised for teaching/training by Sri Devaraj Urs University /Medical Council of India. The co-guide shall be a recognised post graduate teacher of Sri Devaraj Urs 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.

16. Log book:

Each Resident must be asked to present a specified number of cases for clinical discussion, perform procedures, tests, surgeries, present seminars, review articles from various journals in inter-unit/interdepartmental teaching sessions. They should be entered in a Log Book. The Log books shall be checked and assessed periodically by the faculty members imparting the training. This will in turn be evaluated /assessed by an external reviewer assigned by the PG Director biannually during the months of July and January.

Procedure for defaulters:

Every department should have a committee containing Head of the department and PG guides to review such situations and counsel the candidate. In extreme cases of default, the departmental committee may recommend that defaulting candidate be withheld from appearing the examination, if she/he fails to fulfil the, requirements in spite of being given adequate chances to set himself or herself right.

B. MONITORING THE PROGRESS OF STUDIES

It is essential to monitor the learning progress of each resident through continuous appraisal and regular assessment. It not only helps teachers to evaluate resident, but also residents to evaluate themselves. The monitoring will be done by the staff of the department based on participation of residents in various teaching / learning activities. It will be structured and assessment will be done using checklists that assess various aspects.

The learning out comes to be assessed should include:

1. Personal Attitudes
2. Acquisition of Knowledge
3. Clinical and operative skills
4. Teaching skills and

5. Dissertation.

1. **Personal Attitudes.**

The essential items are:

- Caring attitudes
- Initiative
- Organisational 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 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 and assessed by the guide, supervisors and peers through Multisource Feedback.

2. **Acquisition of Knowledge**

The methods used comprises of the following:

a) Log book:

Recording the participation in various teaching / learning activities aid in the internal evaluation of the resident. The specified number of activities attended (clinical discussion, procedures and operations observed, assisted and performed/presented seminars and review articles from various journals in inter-unit/inter departmental teaching sessions) and presentations are to be recorded.

The purpose of the Log Book is to:

a) Help maintain a record of the work done during training,
b) Enable Consultants to have direct information about the work;
c) Used to assess the experience gained periodically.

The Log books shall be checked and assessed periodically monthly basis by guide / head of the unit/ head of the department and biannually by the external reviewer in January and July

b) 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 attending the meeting using a checklist.

c) Seminars / Symposia:

The topics will be assigned to the resident well in advance to facilitate in gaining a better insight into the subject and assessed using a checklist.

d) Clinico-Pathological conferences:

It is a multidisciplinary case study of an interesting case to train the resident 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.

e) **Clinical skills**

Skills in outpatient and ward work should be assessed periodically. The assessment should include the resident's sincerity and punctuality, analytical ability and communication skills –Mini CEX

f) **Clinical meetings (Clinical Presentations)**

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

3. **Clinical and Operative skills:**

The resident will be given graded responsibility to enable learning by apprenticeship. The performance is assessed by the faculty by Direct observational procedural skills (DOPS).

4. **Teaching skills:**

Microteaching Pedagogy - Residents will teach graduates and paramedical students (BSc and MSc Optometry). This performance will be based on assessment by the faculty members of the department and from feedback from the undergraduate students.

5. **Dissertation in the Department:**

Periodic presentations are to be made in the department. Initially the topic selected is to be presented before submission to the University for registration, again before finalisation for critical evaluation and another before final submission of the completed work.

Periodic tests:

The department conducts quarterly internal assessment in theory and practicals /clinicals for all the residents. Records and marks obtained in such tests will be maintained by the Head of the Department and sent to the University, when called for.

Records:

Monthly and quarterly reviews of records, log books and marks obtained in tests will be maintained by the Head of the Department and will be made available to the University or MCI.

Procedure for defaulters:

The defaulting candidate is counselled 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 fulfil the requirements in spite of being given adequate chances to set himself or herself right.

ASSESSMENT

i. FORMATIVE ASSESSMENT

It is essential to monitor the learning progress of each candidate through **continuous appraisal and regular assessment.** It not only helps teachers to evaluate students, but also students to evaluate themselves. The monitoring to be done by the staff of the department based on participation of students in various teaching / learning activities.

This includes assessment of patient care, procedural & academic skills, interpersonal skills, professionalism, self-directed learning and ability to practice in the system.

Assessment is done quarterly by Unit Head through

d. Seminar
e. Journal clubs
f. Log book
g. Case based discussions
h. Postgraduate Student's Appraisal Form
i. Multisource Feedback (MSF)
j. Mini clinical examination (Mini-CEx)
k. Direct Observation of procedural skills (DOPS)
l. Internal assessment- written papers (theory), practicals / clinical and viva voce.

Attendance, Progress and Conduct

Academic term of 6 months' shall be taken as a unit for the purpose of calculating attendance. Every candidate is required to attend a minimum of 80% of the training during each academic term of the post graduate course. All the candidates joining the Post Graduate training programme shall work as 'Full Time Residents' and shall attend not less than 80% of the imparted training including assignments, full time responsibilities and participation in all facets of the educational process. A resident will require 50% internal assessment marks so as to make him eligible for the postgraduate degree examination.

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

The resident should present one poster, 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 postgraduate studies so as to make him eligible to appear at the postgraduate degree examination. Ref: As MCI Notification dated 09-12-2009, vide No.MCI.18(1)/2009-Med.55455 and Para No.4.

COMMON ENTRUSTABLE PROFESSIONAL ACTIVITY (EPA)

1. EPA 1: Gather a history and perform a physical examination
2. EPA 2: Prioritize a differential diagnosis following a clinical encounter
3. EPA 3: Recommend and interpret common diagnostic and screening tests
4. EPA 7: Form clinical questions and retrieve evidence to advance patient care
5. EPA 8: Give or receive a patient handover to transition care responsibility
6. EPA 9: Collaborate as a member of an inter-professional team
7. EPA 10: Recognize a patient requiring urgent or emergent care and initiate evaluation and
   management
8. EPA 11: Obtain informed consent for tests and/or procedures

ENTRUSTABLE PROFESSIONAL ACTIVITY FOR MS OPHTHALMOLOGY

1. EPA 1: Evaluation and management of visual impairment
2. EPA 2: Perform Retinoscopy and Refraction
3. EPA 3: Evaluation and management of acute red eye
4. EPA 4: Evaluation and management of ocular emergency
5. EPA 5: Perform Cataract surgery

Milestone	Level of Supervision	Timeline	Dreyfus Stage
I	Observation but no execution, even with direct supervision –beginning of residency	At the beginning of 1st year (first half)	**Novice**
II	Execution with direct, proactive supervision	1st year (later half)	**Advanced Beginner**
III	Execution with reactive supervision	2nd year of residency period	**Competent**
IV	Supervision at a distance and/or post hoc	3rd year (first half)	**Proficient**
V	Supervision provided by the trainee to more junior colleagues	3rd year (later half)	**Expert**

MAPPING THE ENTRUSTABLE PROFESSIONAL ACTIVITIES TO COMPETENCIES

Sl. No	EPA	Patient Care	Medical Knowledge	Practice Based Learning & Improvement	Interpersonal Communication skills	Professionalism	Systems Based Practice
1	Evaluation and management of visual impairment	+	+	+	+	+	-
2	Perform Retinoscopy and Refraction	+	+	+	+	+	+
3	Evaluation and management of Acute red eye	+	+	+	+	+	+
4	Evaluation and manageme nt of ocular emergency	+	+	+	+	+	+
5	Perform Cataract surgery	+	+	+	+	+	+

SIX CORE COMPETENCIES FOR EPA

1. **PATIENT CARE (PC)**: Provide patient-centered care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health
   PC1: Perform all medical, diagnostic, and surgical procedures considered essential for the area of practice

PC2: Gather essential and accurate information about patients and their condition through history taking, physical examination, and the use of laboratory data, imaging, and other tests

PC3: Organize and prioritize responsibilities to provide care that is safe, effective, and efficient

PC4: Interpret laboratory data, imaging studies, and other tests required for the area of practice

PC5: Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence, and clinical judgment

PC6: Develop and carry out patient management plans

PC7: Counsel and educate patients and their families to empower them to participate in their care and enable shared decision making

PC8: Provide appropriate referral of patients, including ensuring continuity of care throughout transitions between providers or settings and following up on patient progress and outcomes

PC9: Provide health care services to patients, families, and communities aimed at preventing health problems or maintaining health

PC10: Provide appropriate role modeling

PC11: Perform supervisory responsibilities commensurate with one's roles, abilities, and qualifications

2. **MEDICAL KNOWLEDGE (MK)**: Demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social–behavioral sciences, as well as the application of this knowledge to patient care

   MK1: Demonstrate an investigatory and analytic approach to clinical situations **MK2:** Apply established and emerging biophysical scientific principles fundamental to health care for patients and populations

   MK3: Apply established and emerging principles of clinical sciences to diagnostic and therapeutic decision making, clinical problem solving, and other aspects of evidence-based health care

   MK4: Apply principles of epidemiological sciences to the identification of health problems, risk factors, treatment strategies, resources, and disease prevention/health promotion efforts for patients and populations

   MK5: Apply principles of social–behavioral sciences to provision of patient care, including assessment of the impact of psychosocial–cultural influences on health, disease, care-seeking, care compliance, and barriers to and attitudes toward care **MK6:** Contribute to the creation, dissemination, application, and translation of new health care knowledge and practices

3. **PRACTICE-BASED LEARNING AND IMPROVEMENT (PBLI)**: Demonstrate the ability to investigate and evaluate their care of patients, to appraise and

assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning

PBLI1: Identify strengths, deficiencies, and limits in one's knowledge and expertise

PBLI2: Set learning and improvement goals

PBLI3: Identify and perform learning activities that address one's gaps in knowledge, skills, or attitudes

PBLI4: Systematically analyses practice using quality-improvement methods, and implements changes with the goal of practice improvement

PBLI5: Incorporate feedback into daily practice

PBLI6: Locate, appraises, and assimilates evidence from scientific studies related to patients' health problems

PBLI7: Use information technology to optimize learning

PBLI8: Participate in the education of patients, families, students, trainees, peers, and other health professionals

PBLI9: Obtain and utilize information about individual patients, populations of patients, or communities from which patients are drawn to improve care

PBLI10: Continually identifies, analyse, and implement new knowledge, guidelines, standards, technologies, products, or services that have been demonstrated to improve outcomes

7. **INTERPERSONAL AND COMMUNICATION SKILLS (ICS)**: Demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals

ICS1 Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds **ICS2** Communicate effectively with colleagues within one's profession or specialty, other health professionals, and health -related agencies

ICS3 Work effectively with others as a member or leader of a health care team or other professional group

ICS4 Act in a consultative role to other health professionals

ICS5 Maintain comprehensive, timely, and legible medical records

ICS6 Demonstrate sensitivity, honesty, and compassion in difficult conversations (e.g., about issues such as death, end-of-life issues, adverse events, bad news, disclosure of errors, and other sensitive topics)

ICS7 Demonstrate insight and understanding about emotions and human responses to emotions that allow one to develop and manage interpersonal interactions

8. **PROFESSIONALISM (P)**: Demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles
   PROF1: Demonstrate compassion, integrity, and respect for others
   PROF2: Demonstrate responsiveness to patient needs that supersedes self- interest
   PROF3: Demonstrate respect for patient privacy and autonomy
   PROF4: Demonstrate accountability to patients, society, and the profession **PROF5**: Demonstrate sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation
   PROF6: Demonstrate a commitment to ethical principles pertaining to provision or withholding of care, confidentiality, informed consent, and business practices, including compliance with relevant laws, policies, and regulations
9. **SYSTEMS-BASED PRACTICE (SBP)**: Demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care
   SBP1: Work effectively in various health care delivery settings and systems relevant to one's clinical specialty
   SBP2: Coordinate patient care within the health care system relevant to one's clinical specialty
   SBP3: Incorporate considerations of cost awareness and risk– benefit analysis in patient and/or population-based care
   SBP4: Advocate for quality patient care and optimal patient care systems
   SBP5: Participate in identifying system errors and implementing potential systems solutions
   SBP6: Perform administrative and practice management responsibilities commensurate with one's role, abilities, and qualifications

Title of EPA -1	**EVALUATION AND MANAGEMENT OF VISUAL IMPAIRMENT**
Characteristics of EPA	Executable independently, observable, measurable, essential to profession, reflects competencies, focused tasks
Setting	Outpatient Department, Emergency care unit, Pediatrics ward, community health care programmes
Description of EPA	• Resident should be able to take clinical history, guide patients through appropriate examination and give information about their problems. • Visual acuity should be recorded for near and distance using an appropriate method and interpret the results.

	• Should assess the colour vision using an appropriate method and interpret the results. • Should know the principles of assessing contrast sensitivity. • Should be able to apply and interpret alternative methods of assessing vision in children and adults who have language and other barriers to communication. • Approximate the equivalent levels of vision in Snellen or log MAR vision scores. • Analyse the cause for visual impairment using appropriate equipment for evaluation and manage accordingly.
Relevant Core Competencies	Patient Care: PC1, PC2, PC7, PC8 Knowledge for practice: KP1, KP3, KP4 Practice Based Learning and Improvement: PBLI2, PBLI3, PBLI6, PBLI7, PBLI8, PBLI10 Interpersonal and Communication Skills: ICS1, ICS2, ICS5, ICS7 Professionalism: P1, P4 Systems Based Practice: SBP1, SBP3, SBP5, Inter-professional Collaboration: IPC1, IPC2, IPC3 Personal and Professional Development: PPD1, PPD5, PPD7
Level of achievement of EPA	Level I: Novice - At the beginning of first year of residency Level II: Advanced beginner - At the end of first year of residency Level III: Competent- At the end of second year of residency Level IV: Proficient -At third year of residency Level V: Expert - At the end of third year of residency.
Assessment Methods	1. Documentation of written protocol in practical record. 2. Discussion of the same with the moderator and faculty and obtaining feedback. 3. Direct Observed Procedural Skills (DOPS)
EPA – 2	**PERFORM RETINOSCOPY AND REFRACTION**
Characteristics of EPA	Executable independently, observable, measurable, essential to profession, reflects competencies, focused tasks
Setting	Outpatient Department
Description of EPA	• Resident should be able to take appropriate history in patients with complaints of blurred or diminished vision. • Assess patient's refractive error by performing retinoscopy. • Assess patient's spectacle lenses using neutralization techniques and focimetry. • Perform accurate subjective refraction, and provide an appropriate prescription. • Assess patient's binocular co-operation and advise on whether

	this should be corrected optically. • Perform an accurate cycloplegic refraction (especially on a child) and provide an appropriate prescription. • Assess the type and strength of lenses or prisms and provide an appropriate prescription. • Recognize the difference between refracting children and adults. • Be aware of when to correct a refractive error and when it should be left untreated. • Know the different forms of spectacle lenses (eg: monofocal, bifocal and progressive lenses) • Be familiar with optical prescription documentation. •
Relevant core competency	Patient Care - PC 1, PC 3, PC 5 Knowledge for Practice -KP 1, KP 3 Practice-based Learning and Improvement- PLB 1 Interpersonal and Communication Skills- ICS 1, ICS 2, ICS 5 Professionalism – P 1, P 2, P 6
Level of achievement of EPA	Level I: Novice - At the beginning of first year of residency Level II: Advanced beginner - At the end of first year of residency Level III: Competent- At the end of second year of residency Level IV: Proficient -At third year of residency Level V: Expert - At the end of third year of residency.
Assessment method	1. DOPS 2. MINI CEX

Title of EPA-3	**EVALUATION AND MANAGEMENT OF ACUTE RED EYE**
Characteristics of EPA	Executable independently, observable, measurable, essential to profession, reflects competencies, focused tasks
Setting	Outpatient Department, Emergency care unit, Pediatrics ward, community
Description of EPA	• Resident should be able to obtain a history of ocular trauma, contact lens wear, onset and duration of redness, associated with eye pain, watering, photophobia, itching and discharge. • Assess visual acuity and perform an examination of the ocular adnexa, eyelids, orbits and anterior segment using appropriate equipment and illumination. • Should carefully evert and inspect the eyelids followed by examination of the conjunctiva, cornea, iris pupil and lens

	using the slit lamp by employing all of the functions of the slit lamp and use accessory equipment when indicated and interpret their findings accurately. • Resident should be able to assess the pupil for abnormalities of shape, size and reactions and accurately interpret their findings. • Should be able to inspect tarsal conjunctiva for papillae or follicles, seen in conjunctivitis • Should be able to stain with fluorescein for corneal or conjunctival abrasion or ulcer and remove foreign body with moistened cotton bud or irrigate eye with copious amounts of saline, if indicated. • If there's history of trauma, resident should examine for enophthalmos, diplopia, subconjunctival haemorrhage, hyphema and retinal detachment. • Obtain conjunctival or corneal scrapings for diagnostic and therapeutic purposes in cases of corneal ulcers. • Measure the intraocular pressure accurately using a variety of applanation techniques and understand the limits of each to evaluate for glaucoma. • Resident should also be able to investigate into the underlying systemic causes of red eye after a definite ophthalmic diagnosis has been given.
Relevant Core Competencies	Patient Care: PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8 Knowledge for practice: KP1, KP3, KP4 Practice Based Learning and Improvement: PBLI 1, PBLI2, PBLI3, PBLI 4, PBLI6, PBLI8, PBLI10 Interpersonal and Communication Skills: ICS1, ICS2, ICS 3, ICS5, ICS6, ICS7 Professionalism: P1, P4, P5 Systems Based Practice: SBP1, SBP3, SBP4, SBP5 Inter-professional Collaboration: IPC1, IPC2, IPC3 Personal and Professional Development: PPD1, PPD4, PPD7, PPD8
Level of achievement of EPA	Level I: Novice - At the beginning of first year of residency Level II: Advanced beginner - At the end of first year of residency Level III: Competent- At the end of second year of residency Level IV: Proficient -At third year of residency Level V: Expert - At the end of third year of residency.

Assessment Methods	1. Documentation of written protocol in practical record. 2. Direct Observed Procedural Skills. 3. Mini-clinical examination 4. Case-based discussion

Title of EPA -4	ASSESS AND PROVIDE BASIC MANAGEMENT OF PATIENTS WITH OCULAR EMERGENCY
Characteristics of EPA	Executable independently, observable, measurable, essential to profession, reflects competencies, focused tasks
Setting	Emergency care unit
Description of EPA	• Resident should be able to take appropriate history, perform appropriate examination of vision, extraocular movements, and relevant investigations and give information about their problems. • To recognize the condition and features in a patient's clinical picture labelled as an emergency and prioritize and make appropriate arrangement and expedite their care. • Identify conditions which will require rapid intervention, the common algorithm to aid prioritisation, preserve sight, preserve function and relieve pain. • Recognize and initiate management of ocular emergencies and offer first aid or Basic Life Support until expert help arrives. • Understand and apply knowledge of general medicine and surgery relevant to ophthalmic practice. • He/she should recognise when a patient is seriously ill and make appropriate arrangements for the patient's care and timely referral for further intervention when the need arises. • Should be aware of differences between management of adult and paediatric emergency procedures. • To develop/cultivate the habit of proper documentation for effective communication and medico legal importance.
Relevant Core Competencies	Patient Care: PC1, PC2, PC3, PC4, PC5, PC6, PC7, PC8 Knowledge for practice: KP1, KP3, KP4 Practice Based Learning and Improvement: PBLI 2, PBLI 3, PBLI 7, PBLI 8, PBLI 10 Interpersonal and Communication Skills: ICS 1, ICS 2, ICS 3, ICS 4, ICS 5, ICS 6, ICS 7 Professionalism: P1, P2, P3, P4, P6 Systems Based Practice: SBP1, SBP3, SBP4

	Inter-professional Collaboration: IPC1, IPC2, IPC3 Personal and Professional Development: PPD1, PPD2, PPD3, PPD5, PPD6, PPD7
Level of achievement of EPA	Level I: Novice - At the beginning of first year of residency Level II: Advanced beginner - At the end of first year of residency Level III: Competent- At the end of second year of residency Level IV: Proficient -At third year of residency Level V: Expert - At the end of third year of residency.
Assessment Methods	1. Documentation of written protocol in practical record. 2. Direct Observed Procedural Skills. 3. Case based discussion

Title of EPA-5	**PERFORM CATARACT SURGERY**
Characteristics of EPA	Executable independently, observable, measurable, essential to profession, reflects competencies, focused tasks
Setting	Ophthalmology OT
Description of EPA	• Resident should know all the stages of cataract surgery before progressing to complete the procedure. • Adapt technique according to clinical indications and current surgical practice. • Manage intra-operative and post-operative complications. • Able to explain what exactly is achieved by each manoeuvre and how resident can do this with minimal risk and stress to the patient, the trainer and himself. • Record operations, to review regularly himself/herself and frequently with the trainer for further improvisation. • Should acquire the knowledge in managing complicated cases such as high myopes, cases with previous anterior or posterior segment surgery, uveitis, hard or soft cataracts, white cataracts, pseudo-exfoliation, subluxated lenses and post-trauma cases. • Surgical skill should be refined for a safe and effective performance while managing simple as well as complex cases. • Assess postoperatively for any complications and manage them with appropriate medical or surgical corrective measures. • Resident should perform a continuous ongoing audit of • A continuous audit of the cataract surgery performed should

	be practiced which is recorded in the logbook, which includes final visual acuity and any complications which arise. • Continue to seek feedback from trainers, both formal and informal.
Relevant Core Competencies	Patient Care: PC 1, PC 2, PC 3, PC 4, PC 5, PC 6, PC 7, PC 8, PC 9, PC 10, PC 11 Knowledge for practice: KP 1, KP 3 Practice based learning and improvement: PBLI 1, PBLI 2, PBLI 3, PBLI 4 , PBLI 5, PBLI 6, PBLI 7, PBLI 8, PBLI 9, PBLI 10 Interpersonal and communication skills: ICS 1, ICS 2, ICS 3, ICS 5, ICS 6, ICS 7 Professionalism: P 1, P 2, P 3, P 6 Systems based practice: SBP 1, SBP 2, SBP 3, SBP 5 Inter-professional collaboration: IPC 1, IPC 2, IPC 3, IPC 4 Personal and professional development: PPD 1, PPD 3, PPD 4, PPD 5, PPD 7 , PPD 8
Level of achievement of EPA	Level I: Novice - At the beginning of first year of residency Level II: Advanced beginner - At the end of first year of residency Level III: Competent- At the end of second year of residency Level IV: Proficient -At third year of residency Level V: Expert - At the end of third year of residency.
Assessment Methods	1. Practice in a supervised simulated environment. 2. Mini Clinical Examination 3. Log book 4. Video recording of the surgery to be reviewed later

B. SUMMATIVE ASSESSMENT

The summative examination would be carried out as per the Rules given in POSTGRADUATE MEDICAL EDUCATION REGULATIONS, 2000

The examination will be in three parts:

THESIS

Thesis shall be submitted at least six months before the Theory and Clinical / Practical examination. A candidate shall be allowed to appear for the Theory and Practical/Clinical examination only after the acceptance of the Thesis by the examiners.

THEORY

There shall be four theory papers.

Paper I – Basic Sciences related to Ophthalmology, Refraction & Optics

Paper II – Clinical Ophthalmology
Paper III – Systemic Diseases in Relation to Ophthalmology
Paper IV – Recent Advances in Ophthalmology and Community Ophthalmology

THEORY	MARKS ALLOTMENT	MAXIMUM MARKS	MINIMUM MARKS REQUIRED FOR PASSING
PAPER-I	10 X 10	100	50
PAPER-II	10 X 10	100	50
PAPER-III	10 X 10	100	50
PAPER-IV	10 X 10	100	50

CLINICAL / PRACTICAL AND VIVA VOCE EXAMINATION

1. One long case
2. Two short cases with different problems
3. Two fundus Cases
4. One refraction case
5. Oral/Viva voce

Examination shall be comprehensive enough to test the resident's overall knowledge of the subject and shall include:

1. Instruments
2. Pathology specimens
3. Drugs, X-rays, USG/OCT/CT/MRI Scans, etc.
4. Visual fields and other ophthalmic diagnostic charts

<table>
<tr><th>CLINICAL</th><th>MARKS ALLOTMENT</th><th>MAXIMUM MARKS</th><th>MINIMUM MARKS REQUIRED FOR PASSING</th></tr>
<tr><td>LONG CASE</td><td>1 x 75</td><td>75</td><td rowspan="2">100</td></tr>
<tr><td>2 SHORT CASES,
2 FUNDUS CASES,
1 REFRACTION</td><td>5 x 25</td><td>125</td></tr>
<tr><td>VIVA VOCE</td><td>80</td><td rowspan="2">100</td><td rowspan="2">50</td></tr>
<tr><td>PEDAGOGY</td><td>20</td></tr>
</table>

RECOMMENDED BOOKS

1. Comprehensive ophthalmology. AK Khurana.
2. Parsons' Diseases of the eye. Sihota and Tandon.

3. Kanski’s Clinical Ophthalmology. John F Salmon.
4. Duke Elder’s Practice of Refraction. Abrams D. Churchill Livingstone.
5. The Current American Academy of Ophthalmology Basic and Clinical Science Course (13 volumes)
6. Anatomy and physiology of eye. AK Khurana and Indu Khurana.
7. Post Graduate Ophthalmology. Zia Chaudhuri and M Vanathi

REFERENCE BOOKS

1. Anatomy: Wolff 's Anatomy of the Eye and Orbit
2. Physiology: Adler’s Physiology of the Eye
3. Ocular Pharmacology: Havener
4. Clinical Ophthalmic Pathology. Harry J, Misson G. Butterworth/Heinemann.
5. Principles and Practice of Ophthalmology. Albert DM, Jakobiec. W B Saunders
6. Principles & Practice of Ophthalmology. Gholam A Paymen
7. Text book of Ophthalmology. Yanoff and Duker
8. Retina. Stephen J Ryan
9. Ophthalmic Ultrasound: Sandra Byrne and Ronald Green.
10. Cornea: Fundamentals, Diagnosis, and Management. Krachmer JH, Mannis MJ, Holland EJ. Mosby Elsevier.
11. Ophthalmology. Yanoff N, Duker JS. Mosby Elsevier.
12. Review of Ophthalmology. Friedman NJ, Kaiser PK, Trattler WB. Elseview Saunders, Philadelphia.
13. Ophthalmic Surgery: Principles and Techniques. Blackwell Science. Albert DM.
14. Corneal Transplantation. Vajpayee RB. Jaypee Brothers Medical Publishers (P) Ltd, New Delhi.
15. Fundamentals of Clinical Ophthalmology Series. Coster D. Cornea. Blackwell Publishing Limited.
16. The Contact Lens Manual. A practical guide to fitting. Gasson A, Morris A J. Butterworth Heinemann Elsevier.
17. Cataract surgery and its complications. Norman S Jaffe, Mark S Jaffe, Gary F Jaffee
18. Steinert’s cataract surgery.
19. Shields Text book of glaucoma
20. Smith and Nozik : Uvea
21. Rootman’s diseases of the orbit
22. Eyelid, conjunctival and orbital tumors. An atlas and textbook. Shields JA, Shields CL. Philadelphia: Lippincott Williams & Wilkins.
23. Intraocular tumors. An atlas and textbook. Shields JA, Shields CL.
24. Pediatric Ophthalmology. Taylor and Hoyt: Saunders Ltd.
25. Management of Strabismus and Amblyopia. Pratt-Johnson and Tilson: Thieme Verlag.
26. Handbook of Pediatric Eye and Systemic disease. Wright, Spiegel and Thompson.
27. Binocular Vision and Ocular Motility. Theory and Management of Strabismus. Von

Noorden GK. Mosby.
28. Surgical Management of Strabismus. Helveston:
29. Strabismus: A Decision Making Approach. Von Noorden and Helveston:
30. Thyroid Eye Diseases. Char DR. Williams and Wilkins, Baltimore.
31. A Manual of Systematic Eyelid Surgery.Collin JRO (ed). Churchill Livingstone, Edinburgh.
32. Refractive Surgery. Agarwal A, Agarwal A, Jacob Soosan. Jaypee.
33. LASIK Complications, Prevention and management. Gimbel HV, Penno EEA. Slack Inc.
34. Management of Complications of Refractive Surgery. Alio JL, Azar DT. Springer.
35. Quality of Vision: Essential Optics for the Cataract and Refractive Surgeon. Holladay JT. Slack Inc.
36. Textbook of Ophthalmology (2 volumes). Easty D L, Sparrow J M. Oxford Oxford Medical Publications.
37. The Eye. Basic Sciences in Practice. Forrester JV, Dick AD, McMenamin PG, Lee WR. W B Saunders.
38. A Stereoscopic Atlas of Macular Diseases: Diagnosis and Treatment. Gass JDM.
39. Neuroophthalmology. Glaser JS. Lipincott Williams & Wilkins.
40. Inherited Retinal Diseases. A Diagnostic Guide. Jimenez Sierra JM, Ogden TE, Van Boemel GB. Mosby.
41. Walsh and Hoyt's Clinical Neuroophthalmology (5 volumes). Miller NR, Newman NJ, Williams and Wilkins.
42. The human eye. Oyster CW Sinauer Associates. Sunderland. Massachusetts
43. Paediatric Ophthalmology. Taylor D. Blackwell Science.
44. Decision Making in Ophthalmology. Van Heuven WAJ, Zwann J. Mosby.
45. Wills Eye Manual

RECOMMENDED JOURNALS

1. Ophthalmology
2. American Journal of Ophthalmology
3. British Journal of Ophthalmology
4. Indian Journal of Ophthalmology
5. Clinical Ophthalmology
6. JAMA Ophthalmology
7. Investigative Ophthalmology & Visual Science
8. Survey of Ophthalmology
9. Journal of Cataract and Refractive Surgery
10. Vision Research
11. Retina: the Journal of Retinal and Vitreous Diseases
12. Acta Ophthalmologica

13. BMC Ophthalmology
14. Optometry and Vision Science
15. Journal of Refractive Surgery
16. Progress in Retinal and Eye Research
17. Eye
18. Current Eye Research
19. Ophthalmic Surgery, Lasers and Imaging Retina
20. International Ophthalmology
21. European Journal of Ophthalmology
22. Seminars in Ophthalmology
23. Clinical and Experimental Optometry
24. Journal of Pediatric Ophthalmology and Strabismus
25. Ophthalmology and therapy
26. Asia-Pacific journal of ophthalmology
27. Plastic and Reconstructive Surgery
28. Saudi journal of ophthalmology
29. Middle East African Journal of Ophthalmology
30. Ophthalmic Epidemiology
31. Oman Journal of Ophthalmology
32. The Open Ophthalmology Journal
33. Neuro-Ophthalmology
34. Translational Vision Science & Technology
35. Ophthalmology Journal

MODEL CHECK-LIST FOR EVALUATION OF JOURNAL REVIEW PRESENTATIONS

Name of the student:

Name of the Faculty/Observer: Date:

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 understanding of scope and objectives of the paper by the candidate					
3	Whether cross references have been consulted					
4	Whether other relevant publication consulted					
5	Ability to respond 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						

MODEL CHECK-LIST FOR EVALUATION OF SEMINAR PRESENTATIONS

Name of the student:

Name of the Faculty/Observer: Date:

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 reference 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						

MODEL CHECK-LIST FOR EVALUATION OF VIDEO SURGICAL SKILLS

Name of the student:

Name of the Faculty/Observer: Date:

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 understanding of scope and objectives of the paper by the candidate					
3	Whether cross references have been consulted					
4	Whether other relevant publication consulted					
5	Ability to respond 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						

MODEL CHECK LIST FOR EVALUATION OF CLINICAL WORK IN WARD / OPD

(To be completed once a month by respective Unit Heads including posting in other departments)

Name of the Student:

Name of the Unit Head: Date:

Sl No	Points to be considered	Poor 0	Below average 1	Average 2	Good 3	Very Good 4
1	Regularity of attendance					
2	Punctuality					
3	Interaction with colleagues and supportive staff					
4	Maintenance of case records					
5	Presentation of cases during rounds					
6	Investigations work up					
7	Beside manners					
8	Rapport with patients					

9	Counseling patient's relatives for blood donation or Postmortem and Case follow up.					
10	Overall quality of Ward work					
	Total Score					

EVALUATION FORM FOR CLINICAL PRESENTATION

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	Completeness of history						
2	Whether all relevant' points elicited						
3	Clarity of Presentation						
4	Logical order						
5	Mentioned all positive and negative points of importance						
6	Accuracy of general physical examination						
7	Whether all physical signs elicited correctly						
8	Whether any major signs missed or misinterpreted						
9	Diagnosis: Whether it follows logically from history and findings						
10	Investigations required	Complete list					
		Relevant order					
		Interpretation of investigations					
11	Ability to react to questioning Whether it follows logically from history and findings						
12	Ability to defend diagnosis						
13	Ability to justify differential diagnosis						
14	Others						
	Grand Total						

MODEL CHECK LIST FOR EVALUATION OF TEACHING SKILL PRACTICE

SI. No	Skill	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		

MODEL CHECK LIST FOR DISSERTATION PRESENTATION

Name of the Student: Name of the Faculty: Date:

Sl No	Points to be considered divine	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					
Total Score						

MODEL CHECK LIST FOR SYNOPSIS PRESENTATION

Name of the Student: Name of the Faculty: Date:

Sl No	Points to be considered divine	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					
Total score						

CONTINUOUS EVALUATION OF DISSERTATION WORK BY GUIDE / CO-GUIDE

Sl No	Items for observation during presentations	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						

SRI DEVRAJ URS MEDICAL COLLEGE, TAMAKA, KOLAR
DEPARTMENT OF OPHTHALMOLOGY

DIRECT OBSERVATION OF PROCEDURAL SKILLS (DOPS)

Date of assessment:
Trainee’s name & admin number:
Trainee’s year:
Assessor’s name:
Clinical setting (IP/OP):

Procedure:

Please score the training on the scale shown. Please note that your scoring should reflect the performance of the training against which you would reasonably accept at their stage/year of the training and level of experience. Please check ‘Not Applicable’ if the domain is not applicable to the procedure.

Scoring scale:

A+ : well above expectation for stage of training. A:
above expectation for stage of training.

B+: meets expectation for stage of training. B:
borderline for stage of training.
C: below expectation for stage of training.
D: well below expectation for stage of training.

Sl No	SKILL	A+	A	B+	B	C	D
1	Demonstrates appropriate preparation and instrument setup						
2	Explains procedure and obtains informed consent						
3	Uses appropriate anaesthesia (when required)						
4	Aseptic technique, safe use of instruments						
5	Steps of procedure followed						
6	Seeks help where appropriate						
7	Communicates clearly with patient and staff throughout the procedure						
8	Consideration of patient/professionalism						

Based on this observation, rate the level of independent practice the training has shown for this clinical procedure:

1. Trained and competent
2. Guidance required for most/ all procedures (or part performed)
3. Guidance or intervention required for key steps only
4. Procedure performed with minimal guidance or intervention (needed occasional help)
5. Procedure performed completely without guidance or intervention but lacked confidence
6. Procedure performed confidently to high standard without any guidance or intervention
7. Procedure performed confidently and was able to manage expected complication/ problems

Which aspects of encounter were done well?

Suggested areas of improvement:

Agreed action:

Any other comments:

Trainee signature:__________________Assessors signature: ______________

SRI DEVARAJ URS MEDICAL COLLEGE, TAMAKA, KOLAR
DEPARTMENT OF OPHTHALMOLOGY

DIRECT OBSERVATION OF PROCEDURAL SKILLS (DOPS)

Date of assessment:
Trainee's name & admin number:
Trainee's year:
Assessor's name:
Clinical setting (IP/OP):

Procedure:

Please score the trainee on the scale shown. Please note that your scoring should reflect the performance of the trainee against which you would reasonably accept at their stage/year of the training and level of experience. Please check 'Not Applicable' (N/A) if the domain is not applicable to the procedure.

Scoring scale:

A+: well above expectation for stage of training. A:
above expectation for stage of training.
B+: meets expectation for stage of training. B:
borderline for stage of training.
C: below expectation for stage of training.
D: well below expectation for stage of training.

Sl No.	SKILL	A+	A	B+	B	C	D	N/A
1	Understanding the indications, anatomy, surgical technique and complications							
2	Counselling the patient about the procedure and taking informed consent							
3	Demonstrate appropriate preparation: pre-surgery							
4	Appropriate anaesthesia and safe sedation (when required)							

5	Technical ability							
6	Aseptic technique, safe use of instruments and sharps							
7	Seeks help where appropriate							
8	Post-surgery advice Documentation of procedure and post-surgical advice							
9	Communicates clearly with patient and staff throughout the procedure							
10	Consideration of patient / professionalism							

Based on this observation, rate the level of independent practice the trainee has shown for this clinical procedure:

1. Trained and competent
2. Guidance required for most/ all procedures (or part performed)
3. Guidance or intervention required for key steps only
4. Surgical procedure performed with minimal guidance or intervention (needed occasional help)
5. Surgical procedure performed completely without guidance or intervention but lacked confidence
6. Surgical procedure performed confidently to high standard without any guidance or intervention
7. Surgical procedure performed confidently and was able to manage expected complication / problems

Which aspects of encounter were done well?

Suggested areas of improvement:

Agreed action:

Any other comments:

Trainee signature:__________________Assessors signature:______________

SRI DEVARJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH, KOLAR

MINI CLINICAL EVALUATION EXERCISE (CEX)

(ADAPTED FROM ROYAL COLLEGE OF OPHTHALMOLOGY)

DATE OF ASSESSMENT:	
TRAINEE'S NAME/ADMN NO:	
TRAINEE'S YEAR:	
ASSESSOR'S NAME:	
ASSESSOR'S EMAIL:	
CLINICAL SETTING (IP/OP):	

Brief History of Case:

Please score the trainee on the scale shown. Please note that your scoring should reflect the performance of the trainee against which you would reasonably except at their stage/ year of training and level of experience. Please check 'Not applicable' if the domain is not applicable to the procedure:

Well below expectation for stage of training	Below expectation for stage of training	Borderline for stage of training	Meets expectation for stage of training	Above expectation for stage of training	Well above expectation for stage of training	Unable to comment
History taking skills/ medical interview:						
Physical examination:						
Refraction / Slit lamp examination						
Demonstrate appropriate signs / clinical tests / features suggestive:						
Counselling and communication:						
Clinical judgement:						
Organisation / efficiency:						

Overall clinical competency:						
Consideration of patient/ professionalism:						

Based on this observation please rate the level of independent practice the trainee has shown:

Overall Clinical Judgement		
Rating	**Description**	
Below level expected for stage of training	Basic consultation skills resulting in complete history and / or examination findings. Limited clinical judgement following encounter	
Performed at the level expected for stage of training	Sound consultation skills resulting in complete history and / or examination findings. Limited clinical judgement following encounter	
Performed above the level expected for stage of training	Good consultation skills resulting in complete history and / or examination findings. Limited clinical judgement following encounter	

Which aspect of the encounter were done well?

Suggested areas for improvement / development:

Trainee's Signature:________________________Assessor's signature: ________________________

PEDAGOGY STUDENT OBSERVATION SHEET

Rating scale: A- well done: B- done fairly: C- needs to improve: D not applicable

DIRECTIONS: Please enter ratings as A, B, C or D in the boxes

Name of teacher:	**Title:**
• ________________________________	• ________________________________
• ________________________________	• ________________________________
• ________________________________	• ________________________________

- ______________________________
- ______________________________

- ___
- ___

Sl No	Skill	Teacher's action	Teachers performance				
			1	2	3	4	5
1	Set induction	• Aroused interest in the beginning by relation to previous learning, throwing a new idea, questioning, etc. • Specified the objectives of presentation					
2	Planning	2.1 Organized material in a logical sequence 2.2 Used relevant content matter					
3	Presentation	3.1 Changed the pace of presentation by shifting emphasis, joke, etc 3.2 Used specific example to illustrate main ideas 3.3 Used non-verbal cues, eye contact					
4	Pupil participation	4.1 Allowed questions from students 4.2 Asked questions 4.3 Solicited/ raised questions 4.4 Rewarded pupil effort					
5	Use of AV aids	5.1 Used proper AV aids 5.2 Used the aid (s) effectively					
6	Closure `	6.1 Summarized most important points at the end of the lesson					
7	Lesson of the whole was effective						

For additional comments use the reverse side

Remarks:

Teacher 1:
Teacher 2:

Teacher 3:
Teacher 4:
Teacher 5:

- **LOG BOOK**

Table 1: Academic activities <u>attended</u> Name: Admission Year: College:		
Date	**Type of activity** **Specify: Seminar, Journal club, Case presentation, UG teaching**	**Particulars**

- **LOG BOOK**

Table 2 : Academic <u>presentations</u> made by the student Name: Admission Year: College:		
Date	**Topic**	**Type of presentation** **Specify: Seminar, Journal club, Case presentation, UG teaching etc**

LOG BOOK

Table 3: Diagnostic and Operative procedures performed Name: Admission Year: College:				
Date	**Name**	**IP No**	**Procedure**	**Category O, A, PA, PI***

Key: O - Washed up and observed

A - Assisted a more senior Surgeon

PA -Performed procedure under the direct supervision of a senior Surgeon

PI - performed independently

CHECK LIST XIV

Multi- Source Feedback (MSF) Form

Resident Name						
PG YEAR	I		II		III	
Residency duration at the time of assessment in months	06	12	18	24	30	36
Which clinical environment have you primarily observed the resident in?	Ward	OPD		OT		
Your position	Faculty	Resident	Intern	Staff Nurse	Patient/Relative	
Length of working relationship with the resident (in months)						
RATING	Poor 1	Below average 2	Average 3	Good 4	Very good 5	NA
Ability to diagnose patient problems						
Ability to formulate appropriate management						

plans						
Ability to manage complex patients						
Awareness of own limitations						
Ability to respond to psychosocial aspects of illness						
Appropriate utilization of resources eg. Ordering investigations						
Ability to assess risks and benefits when treating patients						
Ability to co-ordinate patient care						
Please describe any strengths/indicators of good practice in the area of “Medical Expertise” of this resident						
Please describe any behavior that has raised concerns or should be a particular focus for development in the area of “Medical Expertise” of this resident						
Technical skills (appropriate to current practice)						
Ability to apply up-to-date/ evidence- based medicine						
Ability to manage time effectively/prioritize						
Ability to deal with stress						
Please describe strengths/indicators of good practice in the area						

of "Personal development & Professionalism" of this resident						
Please describe any behaviour that has raised concerns or should be a particular focus for development in the area of "Personal development & Professionalism" of this resident						
Commitment to learning						
Willingness and effectiveness when teaching/training colleagues						
Ability to give feedback (Private, honest and supportive)						
Please describe strengths/indicators of good practice in the area of "Teaching and Training, Appraising and Assessing" of this resident						
Please describe any behavior that has raised concerns or should be a particular focus for development in the area of practice in the area of "Teaching and Training, Appraising and Assessing" of this resident						
Communication with patients						
Communication with carers and/or family						

Respect for patients and their right to confidentiality						
Verbal communication with colleagues						
Written communication with colleagues						
Ability to recognize and value the contribution of others						
Accessibility						
Reliability						
Leadership skills						
Management skills						
Please describe strengths/indicators of good practice in the area of "Interpersonal & communication skills" of this resident						
Please describe any behavior that has raised concerns or should be a particular focus for development in the area of practice in the area of "Interpersonal &communication skills" of this resident						
Overall, how do you rate this resident compared to other residents at the same duration of residency?						
Do you have any concerns about this resident's probity?	Yes/No	If Yes, please specify here -				
Do you have any concerns about this resident's health in	Yes/No	If Yes, please specify here -				

relation to their fitness to practice?		
Please use this space for any other comments you have about this resident.		

SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION AND RESEARCH

POSTGRADUATE STUDENTS APPRAISAL FORM

DEPARTMENT OF OPHTHALMOLOGY

Name of the PG student: Date:

Unit:

Period of training: From……..........to…………….

Sl No	Particulars	Not Satisfactory			Satisfactory			More Than Satisfactory			Remarks
		1	2	3	4	5	6	7	8	9	
1	Journal based / recent advances learning										
2	Patient assessment • Case discussion • Case presentation										
3	Patient management • Investigation techniques • Interpretation of report • Case management										
4	Departmental and inter departmental learning activity Ward rounds DOPS MiniCEX										
5	External and Outreach Activities / CMEs										
6	Thesis / Research work										
7	Log Book Maintenance										
8	Professionalism										
9	Attendance										

Publications Yes/ No

Remarks*

REMARKS: Any significant positive or negative attributes of a postgraduate student to be mentioned. For score less than 4 in any category, remediation must be suggested. Individual feedback to postgraduate student is strongly recommended.

Signature of Resident	**Signature of Unit head**	**Signature of Guide**	**Signature of HOD**