



Dr. D. Y. PATIL VIDYAPEETH, PUNE
(Deemed to be University)

**Syllabus for
III – MBBS
Part - I**

2014 - 15
(Amended / Revised upto July 2019)



Dr. D.Y. PATIL VIDYAPEETH, PUNE
(Deemed to be University)

(Re-accredited by NAAC with a CGPA of 3.62 on a four point scale at 'A' Grade)
(An ISO 9001 : 2015 Certified University)

Dr. A. N. Suryakar
Registrar

Ref. No. : DPU/875-vii/2019

Date : 11/09/2019

NOTIFICATION

Whereas in pursuance of the following decisions taken by the Board of Management, it is hereby notified to all concerned that the “**Syllabus for III M.B.B.S. Part-I and Part II-2014-15**” is **revised upto July 2019** and hereby published.

- Changes in syllabus for UG and PG in General Medicine, Pulmonary Medicine and General Surgery vide **Resolution No. BM-07-(iii)-4 dated 28th January, 2014.**
- Updation in UG and PG syllabus of General Medicine, **Obstetrics & Gynecology, Orthopedics, Anaesthesiology, ENT and Ophthalmology** vide **Resolution No. BM-04(i)-15, dated 31st March, 2015.**
- Structure format for evolution of History taking for 3rd Semester in General Medicine vide **Resolution No. BM-26(v)-15, dated 29th December, 2015.**
- Replacement of the term “one line answer by one Sentence answer in the Clinical subjects” vide **Resolution No. BM-26(ix)-15, dated 29th December, 2015**
- Introduction of Bioethical aspects in various chapters of all subjects vide **Resolution No. BM-26(xi)-15, dated 29th December, 2015**
- Modifications in UG Syllabus of Psychiatry vide **Resolution No. BM-17(ix)-16, dated 22nd September, 2016.**
- Consideration of weightage to the journal marks in internal assessment of III MBBS Clinical Subjects as continuous day to day assessment vide **Resolution No. BM-05(ii)-17, dated 7th April, 2017.**
- Conduct of prelim exam of 3rd MBBS only after the end of clinical postings, vide **Resolution No. BM-38(ix)-17, dated 27th December, 2017.**
- Enhancement of UG syllabus of General Medicine subject vide **Resolution No. BM-16(x)-18, dated 21st July, 2018.**
- Conduct of P.B.L. classes in E-library in the Department of Paediatrics vide **Resolution No. BM-35(ii)-18, dated 12th October, 2018.**
- Graduate Attributes, Programme Outcomes (POs), Course Outcomes (Cos) and gap analysis for all courses of UG and PG Programmes for Para-Clinical and Surgical Subjects vide **Resolution No. BM-10(vii)-19 dated, 12th April, 2019.**
- Interdisciplinary subjects (for Surgical Subjects) of M.B.B.S, M.D./M.S. and Super-specialty (D.M./M.Ch.) Programs under the Faculty of Medicine vide **Resolution No. BM-10(viii) dated 12th April, 2019.**




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- Graduate Attributes, Programme Outcomes (POs), Course Outcomes (Cos) outcome analysis of Pos and Cos and mapping with objectives for all courses of UG and PG Programmes of Pre-Clinical and **Medicine Subjects** under the Faculty of Medicine vide **Resolution No. BM-27(x)-19 dated 30th July, 2019.**
- Interdisciplinary subjects (**for Medicine Subjects**) of M.B.B.S, M.D./M.S. and Super-specialty (D.M./M.Ch.) Programs under the Faculty of Medicine vide **Resolution No. BM-27(xi) dated 30th July, 2019.**

The “Syllabus for III M.B.B.S. Part-I and Part II– 2014-15” Revised upto July 2019 will be useful to all the concerned. This will come into force with immediate effect.




(Dr. A. N. Suryakar)
Registrar

Copy to:

1. PS to Chancellor for kind information of Hon'ble Chancellor, Dr. D. Y. Patil Vidyapeeth, Pune.
2. PS to Vice Chancellor for kind information of Hon'ble Vice Chancellor, Dr. D. Y. Patil Vidyapeeth, Pune.
3. The Dean, Dr. D. Y. Patil Medical College Hospital & Research Centre, Pimpri, Pune
4. The Controller of Examinations, Dr. D. Y. Patil Vidyapeeth, Pune.
5. Director (IQAC), Dr. D. Y. Patil Vidyapeeth, Pune.
6. Web Master for uploading on Website.

**MAPPING OF PROGRAMME OUTCOMES [POs] AND COURSE
OUTCOMES [COs] OF MBBS PROGRAMMES**

| Year III / I | |
|---------------------|---------------------|
| Course Code | Course Title |
| MB301 | Community Medicine |
| MB302 | ENT |
| MB303 | Ophthalmology |

| Ophthalmology: (MB303) | | |
|-------------------------------|--|-----------------------------------|
| CO No. | At the end of the course, the learner should be able to: | Mapped Programme Outcomes |
| MB303.1 | Possess knowledge & skill to the student that shall enable him/ her to diagnose common eye problems. | PO1,PO2,PO3, PO5,PO7,PO9 |
| MB303.2 | Should be able to manage major Ophthalmic emergencies including first aid and basic diagnostic and therapeutic procedures | PO1,PO2,PO3, PO5,PO7,PO9 |
| MB303.3 | Able to deal with local & systematic disease which affects vision and take necessary action required to minimize the sequence of such disease. | PO1,PO2,PO3, PO5,PO7,PO8, PO9 |
| MB303.4 | Be aware of adverse drug reaction with special reference to Ophthalmic manifestations. | PO1,PO2,PO3, PO5,PO7,PO8, PO9 |
| MB303.5 | Be aware about National programme of blindness and be able to implement it for Prevention of blindness | PO1,PO2,PO3, PO5,PO6,PO7, PO8,PO9 |
| MB303.6 | Able to organise community based survey and motivate for cataract surgery and eye donation. | PO1,PO2,PO3, PO5,PO6,PO7, PO8,PO9 |
| MB303.7 | Should be able to establish rapport with seniors, colleagues and paramedical workers so as to function as an effective team leader | PO1,PO2,PO3, PO5,PO6,PO7, PO8,PO9 |



OPHTHALMOLOGY

DEPARTMENT OF OPHTHALMOLOGY

These guidelines are based on MCI recommendations. Teaching has to be done keeping in mind the goal and Objectives to be achieved by medical students

(1) GOAL

The broad goal of the teaching of students in ophthalmology is to provide such knowledge and skills to the student that shall enable him/her to practice as a clinician and as a primary eye care physician and also to function effectively as a community health leader to assist in the implementation of National Programme for the prevention of blindness and rehabilitation of the visually impaired.

(2) OBJECTIVES

2.1 Knowledge : -

At the end of the course, student shall have the knowledge of –

- 2.1.1 Common problems affecting the eye,
- 2.1.2 Principles of management of major ophthalmic emergencies,
- 2.1.3 Main systemic diseases affecting the eye;
- 2.1.4 Effects of local and systemic diseases on patient's vision and the necessary action required to minimize the sequelae of such diseases;
- 2.1.5 Adverse drug reactions with special reference to ophthalmic manifestations;
- 2.1.6 Magnitude of blindness in india and its main causes;
- 2.1.7 National programme for control of blindness and its implementation at various levels.
- 2.1.8 Eye care education for prevention of eye problems 24
- 2.1.9 Role of primary health center in organization of eye camps;
- 2.1.10 Organization of primary health care and the functioning of the ophthalmic assistant;

2.1.11 Integration of the national programme for control of blindness with the other national health

2.1.12 Programmes.

2.1.13 Eye bank organization

2.2 Skills :-

At the end of the course, the student shall be able to:
elicit a history pertinent to general health and ocular status;

2.2.1 Assist in diagnostic procedures such as visual acuity testing, examination of eye, Schiotz tonometry, staining of Corneal pathology, confrontational perimetry, subjective refraction including correction of presbyopia and aphakia, direct ophthalmoscopy and conjunctival smear examination and Cover test;

2.2.2 Diagnose and treat common problems affecting the eye;

2.2.3 Interpret ophthalmic signs in relation to common systemic disorders,

2.2.4 Assist/observe therapeutic procedures such as subconjunctival injection, corneal conjunctival foreign body removal, carbolic cautery for

2.2.5 Corneal ulcers, Nasolacrimal duct syringing and tarsorrhaphy;

2.2.6 Provide first aid in major ophthalmic emergencies;

2.2.7 Assist to organize community surveys for visual check-up; 25

2.2.8 Assist to organize primary eye care service through primary health centers.

2.2.9 Use effective means of communication with the public and individual to motivate for surgery in cataract and for eye donation.

2.2.10 Establish rapport with his seniors, colleagues and paramedical workers, so as to effectively function as a member of the eye care team.

(3) INTEGRATION

The undergraduate training in Ophthalmology will provide an integrated approach towards other disciplines especially Neuro-sciences, ENT, General Surgery and Medicine.

(4) LEARNING METHODS

4.1 Total teaching hours: - 100

4.2 Theory lectures: -70 (6th, 7th term). Tutorials-30 (6th +7th term)

4.3 Clinical postings : Three clinical postings of total 10 weeks

4.3.1 1st in 4th semester (2 weeks)

4.3.2 2nd in 6th semester (4 weeks)

4.3.3 3rd in 7th semester (4 weeks) Clinical postings will also include bedside clinics

(5) SYLLABUS

5.1 Anatomy & Physiology of the eye, Orbit, – 3 Lectures

5.1.1 Introduction to eye

5.1.2 Anatomy of the eye

5.1.3 Physiology of the eye

5.1.4 Neurology of the eye 26

5.2 Conjunctiva- 4 lectures

5.2.1 Symptomatic conditions

(a) Hyperemia, subconjunctival haemorrhage

5.2.2 Diseases

(a) Classification of conjunctivitis

(b) Mucopurulent Conjunctivitis

(c) Trachoma

(d) Membranous Conjunctivitis, spring catarrh

(e) Degenerations: -Pinguecula and Pterygium

(f) ophthalmia neonatorum

(resolution no. BM-04-(i)-15 dated 15/5/2015)

5.3 Cornea - 5 lectures

- 5.3.1 Corneal ulcers: Bacterial, fungal, viral
- 5.3.2 Hypopyon ulcer
- 5.3.3 Complication of corneal ulcer
- 5.3.4 Management of complication of corneal ulcer
- 5.3.5 Fascicular ulcer
- 5.3.6 Interstitial keratitis
- 5.3.7 Herpes zoster ophthalmicus
- 5.3.8 Keratoconus
- 5.3.9 Corneal opacities
- 5.3.10 Keratomalacia (Vit A deficiency)
- 5.3.11 Pannus
- 5.3.12 Keratoplasty-eye donation
- 5.3.13 Eye banking

5.4 Sclera – 1 lecture

- 5.4.1 Episcleritis
- 5.4.2 Scleritis
- 5.4.3 Staphyloma

5.5 Uvea - 3 lectures

- 5.5.1 Classification of uveitis
- 5.5.2 Gen.Etiology, investigation and principle management of uveitis
- 5.5.3 Acute & chronic iridocyclitis
- 5.5.4 Panophthalmitis
- 5.5.5 Endophthalmitis
- 5.5.6 Choroiditis
- 5.5.7 Chorioretinitis
- 5.5.8 D/D of Red eye (resolution no. BM-04-(i)-15 Dated 15/5/2015)

5.6 Lens – 5 lectures

- 5.6.1 Cataract- Aetiological classification
- 5.6.2 Senile mature cataract
- 5.6.3 Management of cataract 1) Medical 2) Surgical
- 5.6.4 Anaesthesia
- 5.6.5 Treatment of aphakia
- 5.6.6 IOL implant (Phacoemulsification)
- 5.6.7 Recent advances in cataract management
- 5.6.8 Role of eye camp (resolution no. BM-04-(i)-15 Dated 15/5/2015)

5.7 Glaucoma – 4 lectures

- 5.7.1 Aqueous Humor Dynamics
- 5.7.2 Factors Controlling Normal IOP
- 5.7.3 Tonometry, Automated perimetry
- 5.7.4 Provocative tests
- 5.7.5 Classification of Glaucoma
- 5.7.6 Congenital Glaucoma
- 5.7.7 Angle Closure Glaucoma
- 5.7.8 Open Angle Glaucoma
- 5.7.9 Secondary Glaucoma
- 5.7.10 Recent advances in treatment of glaucoma

5.8 Vitreous – 1 lecture

- 5.8.1 Vitreous Haemorrhage & Opacities
- 5.8.2 PVD
- 5.8.3 Proliferative vitreo – retinopathy

5.9 Intraocular Tumors – 2 lectures

- 5.9.1 Retinoblastoma
- 5.9.2 Malignant Melanoma

5.10 Retina – 3 lectures

5.10.1 Vascular Retinopathies: Diabetic, Hypertensive, Toxemia of pregnancy

5.10.2 Retinal Detachment – classification, aetiology & management

5.10.3 Retinitis Pigmentosa

5.11 Optic nerve – 2 lectures

5.11.1 Optic Neuritis

5.11.2 Papilloedema

5.11.3 Optic Atrophy

5.12 Optics - 5 lectures

5.12.1 Basic Optics

5.12.2 Principles: V.A. testing, Retinoscopy, Ophthalmoscopy (distant direct, direct, indirect)

5.12.3 Refractive errors – Myopia, Hypermetropia, Astigmatism

5.12.4 Accommodation & Presbyopia

5.12.5 Spectacles, Contact Lens

5.12.6 Surgical treatment of Refractive Errors
1) RK 2) PRK 3) LASIK

5.13 Orbit – 2 lectures

5.13.1 Proptosis- Aetiology, Clinical Evaluation, Investigations & Principles of Management

5.13.2 Endocrinal Exophthalmos

5.13.3 Orbital Haemorrhage

5.14 Lids – 3 lectures

5.14.1 Inflammation of various lid glands

5.14.2 Blepharitis

5.14.3 Trichiasis, Entropion

5.14.4 Ectropion

5.14.5 Symblepharon

5.14.6 Ptosis

5.15 Lacrimal System – 3 lectures

- 5.15.1 Epiphora
- 5.15.2 Dry Eye – etiology & treatment
- 5.15.3 Nasolacrimal Duct Obstruction
- 5.15.4 Dacrocystitis – Acute & Chronic
- 5.15.5 Lacrimal gland tumors 29

5.16 Ocular Mobility – 4 lectures

- 5.16.1 Extraocular muscles-Basic anatomy & actions
- 5.16.2 Squint: Gen. Etiology, Diagnosis and principles of management
- 5.16.3 Paralytic and Non Paralytic Squint
- 5.16.4 Heterophoria
- 5.16.5 Nystagmus

5.17 Miscellaneous – 3 lectures

- 5.17.1 Colour Blindness
- 5.17.2 Lasers in Ophthalmology- Principles
- 5.17.3 Recent advances in ophthalmology

5.18 Ocular trauma – 3 lectures

- 5.18.1 Blunt Trauma
- 5.18.2 Perforating Trauma
- 5.18.3 Chemical Burns
- 5.18.4 Sympathetic Ophthalmitis

5.19 Principles of Management of Major Ophthalmic Emergencies – 2 lectures

- 5.19.1 Acute Congestive Glaucoma
- 5.19.2 Corneal Ulcer
- 5.19.3 Intraocular Trauma
- 5.19.4 Chemical Burns
- 5.19.5 Sudden Loss of Vision
- 5.19.6 Acute Iridocyclitis

5.19.7 Secondary Glaucoma

5.19.8 Endophthalmitis

5.20 Systemic Diseases Affecting the Eye – 2 lectures

5.20.1 Tuberculosis

5.20.2 Syphilis

5.20.3 Leprosy

5.20.4 AIDS

5.20.5 Diabetes

5.20.6 Hypertension 30

5.21 Drugs – 2 lectures

5.21.1 Antibiotics

5.21.2 Steroids

5.21.3 Anti Glaucoma Drugs

5.21.4 Mydriatics&Cycloplegics

5.21.5 Viscoelastics

5.21.6 Fluorescein dye

5.21.7 Adverse reactions affecting the eye

5.22 Community Ophthalmology – 2 lectures

5.22.1 Blindness: Definition, causes & Magnitude

5.22.2 N.P.C.B- Vision 2020

5.22.3 Preventable Blindness – causes & treatment

5.22.4 Role of PHCs in Eye Care

5.22.5 Nutritional deficiencies

5.22.6 Role of camp in vision 2020

(6) TUTORIALS (Total 30 Hours)

6.1 Surgical Techniques Cataract - ECCE

- ICCE
- IOL Implantation
- Phaco-emulsification.
- Pterygium
- Chalazion
- Glaucoma
- Foreign Body Removal
- Enucleation
- Keratoplasty
- Basic of squint, L 10

6.2 Instruments

- OPD
- Operative
- Basic Examination and Diagnostic instruments Tonometer, Sac Syringing, Slit Lamp.

6.3 Optics - Lenses – Spherical, Cylindrical, Prisms,

- Pinhole, Slit, Maddox Rod & Maddox wing,
- Red & Green Glasses.
- IOLs
- Ophthalmoscopy 31
- Retinoscopy
- Contact Lenses
- Colour Vision

6.4 Drugs

Miotics, Antibiotics, Antiglaucoma, Mydriatics, Steroids, Anti virals, NSAIDS, Anti Fungals Viscoelastics Pre-Op. & Post – Op.

(7) Brief Summary of theory lectures held in 6th & 7th Terms

- 7.1 Anatomy & Physiology 3
- 7.2 Optics 5
- 7.3 Conjunctiva 4
- 7.4 Cornea 5
- 7.5 Sclera 1
- 7.6 Uvea 3
- 7.7 Cataract 5
- 7.8 Glaucoma 4
- 7.9. Optic Nerve 2
- 7.10 Retina 3
- 7.11 Vitreous 1
- 7.12 Squint 4
- 7.13 Community Ophthalmology 2
- 7.14 Lids 3
- 7.15 Orbit 2
- 7.16 Lacrimal Apparatus and Dry Eye 3
- 7.17 Miscellaneous & Others 20

| | |
|-----------------------|------------|
| Total Lectures | 70 |
| Tutorials | 30 |
| | 100 |
| | 32 |

(8) Evaluation Methods -
(Theory, Practical and Viva)

8.1 Internal assessment: 20 (Theory 10 +Practical 10)

- 8.1.1 Marks of Internal Assessment should be sent to University before the commencement of Theory examination.
- 8.1.2 Passing in internal assessment is essential for passing, as Internal assessment is separate head of passing, in examination.
- 8.1.3 It will also be considered for grace marks as per existing rules
- 8.1.4 Combined theory and practical of internal assessment will be considered for passing in internal assessment.

- 8.1.5 Student will be allowed to appear for both theory and practical exam independent of marks obtained in internal assessment but he if fails in that head even after including the grace marks he will be declared “Fail in that Subject”.

8.2 Internal Assessment in Theory

- 8.2.1 Examinations during semesters : This will be carried out by conducting theory examinations during 6th semester (50 marks). Total of 50marks to be converted into 5 marks. (A/5)
- 8.2.2 Prelim examination: This shall be carried out during 7th semester. One theory papers of 40 marks as per university examination. Total of 40 marks to be converted into 5 marks. (B/5) Total marks of Internal assessment- Theory will be addition of A and B.

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8.3 Internal assessment in Practical

Examinations at end of Clinical postings:

- 8.3.1 There will be practical examination at the end of each clinical posting of Ophthalmology, 6th and 7th semester. Each examination will be of 50 marks. Best of two- 50marks , will be converted to 5 marks.(C/5)
- 8.3.2 Preliminary examination: This will be conducted for 40 marks as per university pattern and marks will be converted to 5 (D/5).

Total marks of Internal of Practical will be addition of C and D.

(9) PATTERN OF FINAL EXAMINATION

(including distribution of marks, questions and time)

Pattern of theory examination including distribution of marks -

- 9.1 There shall be one theory paper, carrying 40 marks**
- 9.2 The paper will have two sections, A and B**
- 9.3 The paper will be of 2.5 hours duration.**
- 9.4 Section A and Section B will have to be written in separate answer sheets.**

9.5 Theory : 40 marks Duration : Two and half hours (2 & 1/2) hours

9.5.1 Section A(22)

- i) One line answer questions. Answer any 8 out of 10 (8marks)
- ii) Structured Long Answer question- Answer any 2 out of 3 (2X7=14 marks)

9.5.2 Section B

- 9.5.3 i) Short answer question—Answer any 6 out of 8 (18 marks)**

9.6 Practical : 40 marks

- 9.6.1 Clinical : One long case : 25 marks :30 min. for taking case and 10 minutes for assessment,
Drugs : 5 marks 34**

- 9.6.2 Oral (viva voce) :10 marks:10 min. duration**

- 1. Optics 05 marks
- 2. Instruments 05 marks

(10) BOOKS RECOMMENDED

10.1 Text books :

- 10.1.1 Parson` Diseases of Eye 22nd Edition –2014publisher Butterworth-Heinemann**

- 10.1.2 elsevier publication**

- 10.1.3 Text book of diseases of eye by VasudevAnand Rao- ISBN -13 3rd edition 2015 Published by A.I.T.R.S publisher &distributors**

- 10.1.4 Comprehensive Ophthalmology by A K Khurana 6th edition 2015 Jaypee publication**

- 10.1.5 Basic Ophthalmology by Renu Jogi- 5th edition 2016 Published by Jaypee Brothers Medical Publisher (P) Ltd.**

- 10.1.6 Essential of Ophthalmology by Samar K. Basak- 6th edition Published by jaypee brothers**

10.2 Reference Books :

- 10.2.1 Clinical Ophthalmology Jack J Kanski, 8th edition, 2015
elsevier publication -
- 10.2.2 Essentials of Ophthalmology Pradeep Sharma, 3rd edition CBS
Publishers
- 10.2.3 Manual of Ocular Diagnostic & Therapy Pavan Langston, 6th
edition, 2008 wolter kluwer Co.