



**YENEPOYA**

(DEEMED TO BE UNIVERSITY)

Recognized under Sec 3(A) of the UGC Act 1956

Accredited by NAAC with 'A' Grade

## **YENEPOYA MEDICAL COLLEGE**

**PROGRAM AND COURSE OUTCOMES**

**UNDERGRADUATE PROGRAM**

**BACHELOR OF MEDICINE & BACHELOR OF SURGERY**

**(MBBS)**

**ATTESTED**

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## PROGRAM OUTCOMES

### UNDERGRADUATE PROGRAM

#### BACHELOR OF MEDICINE & BACHELOR OF SURGERY

(K=Knowledge, S=Skill, A=Attitude)

Name of PO	Description
PO 1	Be competent in diagnosis and management of common health problems of the individual and the community, commensurate with his/her position as a member of the health team at the primary, secondary or tertiary levels, using his/her clinical skills based on history, physical examination and relevant investigations. (K,S, A)
PO 2	Be competent to practice preventive, promotive, curative and rehabilitative medicine in respect to the commonly encountered health problems. (S,A)
PO 3	Appreciate rationale for different therapeutic modalities, be familiar with the administration of the "essential drugs" and their common side effects. (K)
PO 4	Be able to appreciate the socio-psychological, cultural, economic and environmental factors affecting health and develop humane attitude towards the patients in discharging one's professional responsibilities. (K,A)
PO 5	Possess the attitude for continued self learning and to seek further expertise or to pursue research in any chosen area of medicine, action research and documentation skills. (S,A)
PO 6	Be familiar with the basic factors which are essential for the implementation of the National Health Programs including practical aspects of the following: (i) Family Welfare and Maternal and Child Health (MCH); (ii) Sanitation and water supply; (iii) Prevention and control of communicable and non-communicable diseases; (iv) Immunization; (v) Health Education; (vi) Indian Public Health Standards (IPHS) at various level of service delivery; (vii) Bio-medical waste disposal; and (viii) Organizational and or institutional arrangements. (KS,A)
PO 7	Acquire basic management skills in the area of human resources, materials and resource management related to health care delivery, General and hospital management, principal inventory skills and counseling. (S,A)
PO 8	Be able to identify community health problems and learn to work to resolve these by designing, instituting corrective steps and evaluating outcome of such measures. (S,A)
PO 9	Be able to work as a leading partner in health care teams and acquire proficiency in communication skills. (S,A)
PO 10	Be competent to work in a variety of health care settings. (K,S,A)
PO 11	Have personal characteristics and attitudes required for professional life including personal integrity, sense of responsibility and dependability and ability to relate to or show concern for other individuals. (A)

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**COURSE OUTCOME**  
**UNDERGRADUATE PROGRAM**  
**BACHELOR OF MEDICINE & BACHELOR OF SURGERY**

**Name of CO    Description**

<b>ANATOMY</b>	CO 1	Understanding of the gross and microscopic structure and development of human body
	CO 2	Comprehension of the normal regulation and integration of the functions of the organs and systems on basis of the structure and genetic pattern
	CO 3	Understanding of the clinical correlation of the organs and structures involved and interpret the anatomical basis of the disease presentations.

**Name of CO    Description**

<b>PHYSIOLOGY</b>	CO 1	Understanding of the normal functioning of the organs and organ systems of the body,
	CO 2	Comprehension of the normal structure and organization of the organs and systems on basis of the functions,
	CO 3	Understanding of age-related physiological changes in the organ functions that reflect normal growth and development,
	CO 4	Understand the physiological basis of diseases.

**BIOCHEMISTRY    Name of CO    Description**

	CO 1	Understanding of biochemical and molecular processes involved in health and disease
	CO 2	Understanding of importance of nutrition in health and disease
	CO 3	Understanding of biochemical basis and rationale of clinical laboratory tests, and demonstrate ability to interpret these in the clinical context

**PATHOLOGY**

**Name of CO    Description**

	CO 1	Comprehension of the causes, evolution and mechanisms of diseases
	CO 2	Knowledge of alterations in gross and cellular morphology of organs in disease states
	CO 3	Ability to correlate the natural history, structural and functional changes with the clinical manifestations of diseases, their diagnosis and their diagnosis and therapy

**MICROBIOLOGY**

**Name of CO    Description**

	CO 1	Understanding of role of microbial agents in health and disease
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CO 2	Understanding of the immunological mechanisms in health and disease,
CO 3	Ability to correlate the natural history, mechanisms and clinical manifestations of infectious diseases as they relate to the properties of microbial agents
CO 4	Knowledge of the principles and application of infection control measures
CO 5	An understanding of the basis of choice of laboratory diagnostic tests and their interpretation, antimicrobial therapy, control and prevention of infectious diseases.

PHARMACOLOGY	Name of CO	Description
	CO 1	Knowledge about essential and commonly used drugs and an understanding of the pharmacologic basis of therapeutics
	CO 2	Ability to select and prescribe medicines based on clinical condition and the pharmacologic properties, efficacy, safety, suitability and cost of medicines for common clinical conditions of national importance
	CO 3	Knowledge of pharmacovigilance, essential medicine concept and sources of drug information and industry-doctor relationship
	CO 4	Ability to counsel patients regarding appropriate use of prescribed drug and drug delivery systems

FORENSIC MEDICINE	Name of CO	Description
	CO 1	Understanding of medico-legal responsibilities of physicians in primary and secondary care settings
	CO 2	Understanding of the rational approach to the investigation of crime, based on scientific and legal principles
	CO 3	Ability to manage medical and legal issues in cases of poisoning / overdose
	CO 4	Understanding the medico-legal framework of medical practice and medical negligence
	CO 5	Understanding of codes of conduct and medical ethics

OTORHINOLARYNGOLOGY	Name of CO	Description
	CO 1	Knowledge of the common Otorhinolaryngological (ENT) emergencies and problems
	CO 2	Ability to recognize, diagnose and manage common ENT emergencies and problems in primary care setting
	CO 3	Ability to perform simple ENT procedures as applicable in a primary care setting
	CO 4	Ability to recognize hearing impairment and refer to the appropriate hearing impairment rehabilitation programme.

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<b>OPHTHALMOLOGY</b>	<b>Name of CO</b>	<b>Description</b>
	CO 1	Knowledge of common eye problems in the community
	CO 2	Recognize, diagnose and manage common eye problems and identify indications for referral
	CO 3	Ability to recognize visual impairment and blindness in the community and implement. National programmes as applicable in the primary care setting

<b>COMMUNITY MEDICINE</b>	<b>Name of CO</b>	<b>Description</b>
	CO 1	Understanding of the concept of health and disease
	CO 2	Understanding of demography, population dynamics and disease burden in National and global context,
	CO 3	Comprehension of principles of health economics and hospital management
	CO 4	Understanding of interventions to promote health and prevent diseases as envisioned in National and State Health Programmes
	CO 5	Understanding of physical, social, psychological, economic and environmental determinantsof health and disease
	CO 6	Ability to recognize and manage common health problems including physical, emotional and social aspects at individual family and community level in the context of National Health Programmes,
	CO 7	Ability to Implement and monitor National Health Programmes in the primary care setting
	CO8	Knowledge of maternal and child wellness as they apply to national health care priorities andProgrammes
	CO9	Ability to recognize, investigate, report, plan and manage community health problems including malnutrition and emergencies.

<b>GENERAL MEDICINE</b>	<b>Name of CO</b>	<b>Description</b>
	CO 1	Demonstrate understanding of the patho-physiologic basis, epidemiological profile, signs and symptoms of disease and their investigation and management,
	CO 2	Competently interview and examine an adult patient and make a clinical diagnosis,
	CO 3	Appropriately order and interpret laboratory tests,
	CO 4	Initiate appropriate cost-effective treatment based on an understanding of the rational drug prescriptions, medical interventions required and preventive measures,
	CO 5	Follow up of patients with medical problems and refer whenever required,
	CO 6	Communicate effectively, educate and counsel the patient and family,
	CO 7	Manage common medical emergencies and refer when required,
	CO8	Independently perform common medical procedures safely and understand

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- patient safety issues.
- CO9 Ability to recognize and manage common health problems at community level in the context of National Health Programmes
- CO10 Have adequate professional qualities like personal integrity, sense of responsibility, dependability, ethics and attitudes for lifelong commitment to fulfill the role of Physician in the community.

	<b>Name of CO</b>	<b>Description</b>
<b>GENERAL SURGERY</b>	CO 1	Understanding of the structural and functional basis, principles of diagnosis and management of common surgical problems in adults and children
	CO 2	Ability to choose, calculate and administer appropriately intravenous fluids, electrolytes, blood and blood products based on the clinical condition
	CO 3	Ability to apply the principles of asepsis, sterilization, disinfection, rational use of prophylaxis, therapeutic utilities of antibiotics and universal precautions in surgical practice
	CO 4	Knowledge of common malignancies in India and their prevention, early detection and therapy
	CO 5	Ability to perform common diagnostic and surgical procedures at the primary care level
	CO 6	Ability to recognize, resuscitate, stabilize and provide Basic & Advanced Life Support to patients following trauma
	CO 7	Ability to administer informed consent and counsel patient prior to surgical procedures
	CO8	Commitment to advancement of quality and patient safety in surgical practice

	<b>Name of CO</b>	<b>Description</b>
<b>OBSTETRICS &amp; GYNECOLOGY</b>	CO 1	Provide peri-conceptual counseling and antenatal care,
	CO 2	Identify high-risk pregnancies and refer appropriately,
	CO 3	Conduct normal deliveries, using safe delivery practices in the primary and secondary care settings
	CO 4	Prescribe drugs safely and appropriately in pregnancy and lactation,
	CO 5	Diagnose complications of labor, institute primary care and refer in a timely manner,
	CO 6	Perform early neonatal resuscitation,
	CO 7	Provide postnatal care, including education in breast-feeding,
	CO8	Counsel and support couples in the correct choice of contraception,
	CO9	Interpret test results of laboratory and radiological investigations as they apply to the care of the obstetric patient.

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CO10	Apply medico-legal principles as they apply to tubectomy, Medical Termination of Pregnancy (MTP), Pre-conception and Prenatal Diagnostic Techniques (PC PNDT Act) and other related Acts.
CO11	Elicit a gynecologic history, perform appropriate physical and pelvic examinations and PAP smear in the primary care setting,
CO12	Recognize, diagnose and manage common reproductive tract infections in the primary care setting,
CO13	Recognize and diagnose common genital cancers and refer them appropriately.

PAEDIATRICS	Name of CO	Description
	CO 1	Ability to assess and promote optimal growth, development and nutrition of children and adolescents and identify deviations from normal,
	CO2	Ability to recognize and provide emergency and routine ambulatory and First Level Referral Unit care for neonates, infants, children and adolescents and refer as may be appropriate,
	CO3	Ability to perform procedures as indicated for children of all ages in the primary care setting,
	CO4	Ability to recognize children with special needs and refer appropriately,
	CO5	Ability to promote health and prevent diseases in children,
	CO6	Ability to participate in National Programmes related to child health and in conformation with the Integrated Management of Neonatal and Childhood Illnesses (IMNCI) Strategy,
	CO7	Ability to communicate appropriately and effectively.

ORTHOPEDICS	Name of CO	Description
	CO 1	Ability to recognize and assess bone injuries, dislocation and poly-trauma and provide first contact care prior to appropriate referral
	CO 2	Knowledge of the medico-legal aspects of trauma
	CO 3	Ability to recognize and manage common infections of bone and joints in the primary care setting
	CO 4	Recognize common congenital, metabolic, neoplastic, degenerative and inflammatory bone diseases and refer appropriately
	CO 5	Ability to perform simple orthopaedic techniques as applicable to a primary care setting
	CO 6	Ability to recommend rehabilitative services for common orthopaedic problems across all ages

**ANAESTHESIOLOGY**    **Name of**    **Description**

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<b>CO</b>	
CO 1	describe and discuss the pre-operative evaluation, assessing fitness for surgery and the modifications in medications in relation to anaesthesia / surgery,
CO 2	Describe and discuss the roles of Anaesthesiologist as a peri-operativephysician including pre-medication, endotracheal intubation, general anaesthesia and recovery (including variations in recovery from anaesthesia and anaesthetic complications),
CO 3	Describe and discuss the management of acute and chronic pain, including labour analgesia,
CO 4	Demonstrate awareness about the maintenance of airway in children and adults in various situations
CO 5	Demonstrate the awareness about the indications, selection of cases and execution of cardiopulmonary resuscitation in emergencies and in the intensive care and high dependency units,
CO 6	Choose cases for local / regional anaesthesia and demonstrate the ability to administer the same
CO 7	Discuss the implications and obtain informed consent for various procedures and to maintain the documents.

**Dermatology,  
Venereology  
and Leprosy**

<b>Name of CO</b>	<b>Description</b>
CO 1	Understanding of the principles of diagnosis of diseases of the skin, hair, nail and mucosa
CO 2	Ability to recognize, diagnose, order appropriate investigations and treat common diseases of the skin including leprosy in the primary care setting and refer as appropriate
CO 3	A syndromic approach to the recognition, diagnosis, prevention, counseling, testing and management of common sexually transmitted diseases including HIV based on national health
CO 4	Ability to recognize and treat emergencies including drug reactions and refer as appropriate

**Radio-  
Diagnosis**

<b>Name of CO</b>	<b>Description</b>
CO 1	Understanding of indications for various radiological investigations in common clinical practice
CO 2	Awareness of the ill effects of radiation and various radiation protective measures to be employed,
CO 3	Ability to identify abnormalities in common radiological investigations.

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	<b>Name of CO</b>	<b>Description</b>
<b>PSYCHIATRY</b>	CO 1	Ability to promote mental health and mental hygiene
	CO 2	Knowledge of etiology (bio-psycho-social-environmental interactions), clinical features, diagnosis and management of common psychiatric disorders across all ages
	CO 3	Ability to recognize and manage common psychological and psychiatric disorders in a primary care setting, institute preliminary treatment in disorders difficult to manage, and refer appropriately
	CO 4	Ability to recognize alcohol/ substance abuse disorders and refer them to appropriate centers
	CO 5	Ability to assess risk for suicide and refer appropriately
	CO 6	Ability to recognize temperamental difficulties and personality disorders
	CO 7	Assess mental disability and rehabilitate appropriately
	CO8	Understanding of National and State programmes that address mental health and welfare of patients and community.

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