

# M.S. Ramaiah University of Applied Sciences

New BEL Road, MSR Nagar, Bangalore – 560054



**RAMAIAH  
UNIVERSITY**  
OF APPLIED SCIENCES

## **PO, PSO & CO**

**Programme: MD in Pharmacology**

**Programme Code: 131**

**Programme Outcome (PO)**

**Programme Specific Outcome (PSO)**

**Course Outcomes (CO)**

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**Principal and Dean**

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# Ramaiah Medical College (RMC)

## Programme Outcomes

### Post Graduate Programme: MD in Pharmacology

#### Programme Outcomes (PO) for MD Pharmacology Postgraduate students:

- PO1.** Apply Pharmacological principles in therapeutics (C,P).
- PO2.** Demonstrate competence in rationally prescribing medication (C,P)
- PO3.** Acquire and develop knowledge, skills and attitude required to be a competent teacher and ethical researcher (A, C, P)
- PO4.** Be able to independently perform pharmacovigilance activity with a reasonable degree of professionalism and competence. (P)

## Programme Specific Outcomes (PSOs)

#### Programme specific outcome (PSO) for MD Pharmacology Postgraduate students:

- PSO1.** To acquire a comprehensive understanding of pharmacology and therapeutics, including essential concepts and principles, drug development processes adhering to the current regulations (C)
- PSO2.** To demonstrate proficiency in promoting rational drug use and Pharmacovigilance activity (C,P)
- PSO3.** To conduct research projects in pharmacology, navigating from research project planning to successful publication (A,P)
- PSO4:** To teach and assess medical, paramedical and allied health students, and acquire skills to conduct research independently (C, P)
- PSO5.** To apply principles of professionalism, ethics, and effective communication in day to day practice (A,P)

## Course Outcomes (COs)

### Course Title & Code: Basic Sciences as applied to Pharmacology (MDC513A)

At the end of the course, the students should be able to:

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## Course Outcomes (COs)

Course Title & Code: General Microbiology and Immunology (MDC521A)

At the end of the course, the students should be able to:

- CO-1. Acquire knowledge about: Important historical events and developments in Microbiology. Basic as well as advanced knowledge regarding various types of microscopes, Biosafety cabinets and other equipments used in Diagnostic Microbiology. Different methods of Sterilization, disinfection and various isolation precautions including standard and transmission based precautions. Nomenclature, classification, morphology, growth requirements of micro-organisms, Host Parasite relationship and the significance of Normal flora in health and disease. Various antimicrobial agents and mechanisms of drug resistance. Bacterial and Molecular genetics relevant for Medical Microbiology. Applications of quality assurance, quality control in microbiology and accreditation of laboratories
- CO-2. Components of immune system, types of immunity and Immune response. Various disorders involving the immune system. Various types, techniques, advances, and applications of vaccines and immunotherapy. Immunological techniques and their applications in diagnostic microbiology as well as research

## Course Outcomes (COs)

Course Title & Code: Clinical & Systemic Microbiology – 1 (MDC522A)

At the end of the course, the students should be able to:

- CO-1. Demonstrate knowledge and skills in various techniques for isolation and identification of bacteria, Demonstrate knowledge about epidemiology, morphology, biochemical properties, antigenic nature, pathogenesis, complications, laboratory diagnosis, treatment and prevention of major bacterial pathogens of medical importance.
- CO-2. Explain general characteristics including morphology & reproduction of fungi Demonstrate knowledge about classification and skills for isolation and identification of fungi Demonstrate knowledge about epidemiology, morphology, biochemical properties, antigenic nature, pathogenesis, complications, laboratory diagnosis treatment and prevention of major fungal pathogens of medical importance.

## Course Outcomes (COs)

Course Title & Code: Clinical & Systemic Microbiology – 2 (MDC523A)

At the end of the course, the students should be able to:

- CO-1. Demonstrates knowledge about general properties, classification, morphology, virus replication & genetics of viruses. Demonstrates knowledge about isolation, identification of viruses and pathogenesis , laboratory diagnosis & treatment of viral infections. Demonstrate knowledge about viral vaccines and anti-viral drugs.

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**CO-2.** Demonstrate knowledge about general characters, classification and methods of identification of parasites.

Demonstrate knowledge about epidemiology, morphology, antigenic nature, life cycle, pathogenesis, complications, laboratory diagnosis, treatment and prevention of Protozoan & Helminthic parasites of medical importance.

## Course Outcomes (COs)

**Course Title & Code: Recent Advances & Applied Microbiology. (MDC524A)**

**At the end of the course, the students should be able to:**

- CO-1.** Demonstrate knowledge about epidemiology of infectious diseases. Demonstrate knowledge about antimicrobial prophylaxis and therapy. Demonstrate knowledge about hospital acquired infections. Demonstrate knowledge about management of biomedical waste
- CO-2.** Demonstrate knowledge about infections of various organs and systems of human body viz. respiratory tract infections, urinary tract infections, central nervous system infections, congenital infections, reproductive tract infections, STI, gastrointestinal infections, hepatitis, pyrexia of unknown origin, infections of eye, ear and nose, septicaemia, endocarditis, haemorrhagic fever etc.
- CO-3.** Demonstrate knowledge and applications of Automation in Microbiology. Demonstrate knowledge and applications about molecular techniques in the laboratory diagnosis of infectious diseases.
- CO-4.** Demonstrate knowledge about principles, methods of preparation, administration and types of vaccines.
- CO-5.** Demonstrate knowledge in animal and human ethics involved in microbiology.

## Course Outcomes (COs)

**Course Title & Code: Thesis – Microbiology (MDP506A)**

**At the end of the course, the students should be able to:**

- CO-1.** Should be introduced to basic research methodology so that he/she can independently conduct fundamental and applied research and he/she should independently write the thesis in accordance with the prescribed instructions as expected of international standards (C,P).
- CO-2.** Demonstrate knowledge in statistical analysis of microbiological data and research methodology
- CO-3.** The student should demonstrate integrity, accountability, respect, compassion and dedicated patient care and a commitment to excellence, continuous professional development and ethical principles relating to research conduct and research publication as applicable to all the specific courses.

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*g* Registrar  
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