Mewar university

M.sc Medical lab technology

Programme Outcomes

PO-1 Advanced knowledge of medical laboratory science: Students will develop a comprehensive understanding of medical laboratory science and its role in healthcare, including knowledge of the principles, procedures, and techniques used in medical laboratory testing.

PO-2 Proficiency in laboratory techniques: Students will gain hands-on experience in laboratory techniques, such as specimen collection, analysis, and interpretation of laboratory results.

PO-3 Understanding of quality assurance: Students will learn about quality assurance in medical laboratory science, including procedures for monitoring and maintaining the quality of laboratory testing.

PO-4 Effective communication skills: Students will develop effective communication skills necessary for collaborating with healthcare professionals, patients, and other stakeholders in a healthcare setting.

PO-5 Research skills: Students will develop research skills necessary for investigating scientific questions related to medical laboratory science.

PO-6 Ethical practice: Students will learn about ethical principles and practices relevant to medical laboratory science and their application in clinical settings.

PO-7 Critical thinking: Students will develop critical thinking skills necessary for interpreting laboratory results, evaluating diagnostic test performance, and making informed clinical decisions.

PO-8 Professionalism: Students will develop professionalism skills necessary for working in a healthcare setting, including professional conduct, teamwork, and lifelong learning.

PO-9 Management and leadership skills: Students will learn about management and leadership principles relevant to healthcare settings, including strategic planning, resource management, and effective team management.

Dr. Ajay
12/08/23

MEWAR UNIVERSITY Chittorgarh-312901 (Raj.)

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PO-10 Understanding of emerging technologies: Students will gain knowledge of emerging technologies and their applications in medical laboratory science, such as molecular diagnostics, next-generation sequencing, and digital pathology. They will learn about the challenges and opportunities presented by these technologies and their potential impact on healthcare delivery.

Dr Faiq Ahmed
12/08/23

MEWAR UNIVERSITY
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Mewar university

M.sc Medical lab technology

PROGRAM SPECIFIC OUTCOMES

PSO-1 Advanced Knowledge and Skills: Students will acquire advanced knowledge and skills in laboratory medicine, including the principles and practices of clinical laboratory sciences, molecular diagnostics, and clinical chemistry.

PSO-2 Laboratory Management: Students will develop skills in laboratory management, including laboratory quality management, laboratory safety, and laboratory information management systems.

PSO-3 Diagnostic Testing: Students will gain proficiency in various diagnostic testing techniques, including laboratory-based tests, imaging tests, and molecular diagnostics.

PSO-4 Research and Innovation: Students will develop skills in research methodology, data analysis, and interpretation of scientific findings, as well as gain knowledge of emerging trends and technologies in laboratory medicine.

PSO-5 Ethical and Professional Practices: Students will understand the ethical and professional standards of laboratory medicine, including the importance of patient confidentiality, informed consent, and professional conduct.

PSO-6 The MMLT program aims to prepare students for leadership roles in laboratory medicine, clinical laboratory sciences, and diagnostic testing, as well as to contribute to the advancement of scientific knowledge and research in the field.

PSO-7 Demonstrate advanced knowledge and understanding of the theoretical and practical aspects of their chosen specialization area.

PSO-8 Apply their knowledge and skills to analyse complex laboratory data, interpret results, and make informed decisions in the diagnosis and treatment of disease.

PSO-9 Evaluate new and emerging laboratory techniques and technologies, and apply them to improve laboratory services and patient outcomes.

PSO-10 Communicate effectively with colleagues, healthcare professionals, and patients to ensure high-quality laboratory services and patient care.

PSO-11 Demonstrate ethical and professional behaviour in all aspects of their work, including patient confidentiality, safety, and regulatory compliance.

PSO-12 Develop and implement quality assurance and quality control programs to ensure the accuracy and reliability of laboratory test results.

Dr Priyanka 12/08/23

Mewar university

M.sc Medical lab technology

Course outcomes

Course- Pathology outcome

CO-1: Demonstrate a comprehensive understanding of the principles and concepts of pathological processes, including etiology, pathogenesis, and morphological changes.

CO-2: Apply knowledge and skills to accurately perform laboratory tests, interpret results, and identify common pathological conditions affecting different organ systems.

CO-3: Analyze and evaluate laboratory findings to correlate clinical manifestations with pathological conditions, aiding in accurate diagnosis and patient management.

CO-4: Apply appropriate safety measures and adhere to ethical guidelines while handling pathological specimens and performing laboratory procedures to ensure patient and personnel safety.

CO-5: Communicate effectively and professionally, both orally and in writing, with healthcare professionals, colleagues, and patients, to convey pathological findings, contribute to interprofessional collaboration, and provide patient education regarding pathological conditions.

Course- Pathology (Practical)

CO-1: Demonstrate proficiency in using common laboratory equipment and instruments used in pathology.

CO-2: Collect, prepare, and appropriately handle various types of biological specimens for pathological analysis.

CO-3: Prepare and analyze stained slides of various tissue samples to identify cellular morphology and abnormalities.

CO-4: Conduct tests to analyze blood and body fluid components such as glucose, cholesterol, urea, creatinine, and electrolytes.

CO-5: Record and document test results accurately in laboratory reports.

Effectively communicate findings to medical professionals and contribute to patient care.

Implement quality control measures to ensure accurate and reliable test results.

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M.sc Medical lab technology

Course -Microbiology outcome

CO-1: Apply fundamental principles and theories of microbiology to analyze and interpret microbial structures, functions, and processes.

CO-2: Demonstrate proficiency in laboratory techniques, equipment, and procedures used in microbiology, including sample collection, culturing, and microscopic examination.

CO-3: Evaluate the impact of microorganisms on human health, disease processes, and the environment, and propose appropriate control measures.

CO-4: Utilize critical thinking and problem-solving skills to design and conduct microbiological experiments, analyze data, and draw valid conclusions.

CO-5: Communicate effectively, both orally and in writing, about microbiological concepts, research findings, and their implications to diverse audiences.

Course -Microbiology (Practical)

CO-1: Demonstrate proficiency in maintaining sterile conditions while handling microbial cultures and specimens.

CO-2: Apply staining techniques to visualize microbial structures, aiding in identification.

CO-3: Perform susceptibility testing of microorganisms to various antibiotics using standardized methods.

CO-4: Maintain accurate and organized laboratory records of microbial cultures and test results.

CO-5: Prepare comprehensive reports detailing findings for healthcare professionals.

Dr Faiz Ahmed
12/02/27.

Mewar university

M.sc Medical lab technology

Course -Biochemistry outcome

CO-1: Analyze the basic principles and concepts of biochemistry, including the structure and function of biomolecules.

CO-2: Apply biochemical techniques and methodologies for the isolation, purification, and characterization of biomolecules.

CO-3: Demonstrate an understanding of biochemical pathways and their regulation in various cellular processes.

CO-4: Evaluate the role of biochemistry in human health and diseases, and apply this knowledge to diagnose and treat biochemical disorders.

CO-5: Communicate effectively about biochemistry principles and research findings through oral presentations, written reports, and scientific literature.

Course -Biochemistry (Practical)

CO-1: Demonstrate proficiency in using laboratory equipment and instruments commonly used in biochemistry.

CO-2: Collect, prepare, and process various biological samples (blood, urine, serum) for biochemical analysis and perform sample centrifugation, separation, and appropriate dilution techniques.

CO-3: Understand the principles behind colorimetric and enzymatic assays used in clinical biochemistry.

CO-4: Implement quality control measures to ensure accuracy and reliability of test results.

CO-5: Record and document test results accurately in laboratory reports.

Effectively communicate findings to healthcare professionals for patient management.

12/06/23

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BSC BRIT

Programme outcomes

PO-1 Job Opportunities for Radiology Graduates: Radiology graduates can get a number of jobs like Assistant technologist, Radiographer, MRI Technician and CT Technologist.

PO-2 Diagnosis Radiology graduates use X-rays, magnetic field and computed tomography to obtain detailed information of inside of the body.

PO-3 Clinical application: Clinics and free-standing imaging centers which may offer both special and general practice opportunities.

PO-4 Technological Competency: Radiology graduate plays a huge role in disease management by giving physicians more options, tools, and techniques for detection and treatment.

PO-5. Patient care: Radiology graduate plays wide role in diagnostic imaging allows for detailed information about structural or disease-related changes. With the ability to diagnose during the early stages, patients may be saved.

PO-6 Portable equipment Besides X-ray, radiology helps in imaging procedures in other imaging processes as well.

PO-7. Equipment handling: Radiology graduates will be able to handle equipments like- X- ray unit, CT scan, Mammography, MRI and DEXA independently.

PO-8. Higher studies: Graduates will have the ability to pursue careers in nuclear medicine, post-graduation and doctorate in radiology and imaging technology.

PO-9. Multidisciplinary work: Diagnostic radiography is a fast-moving and continually changing profession, and long-term career prospects include: management, research, clinical work and academic etc.

PO-10. Skill development through assessment - The knowledge and skills expected from the graduates at various levels. It also enumerates the nature of the various examinations and assessments that planned throughout the training program.

Dr Rajiarthy
12/08/23

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BSC BRIT

PO-11 Basic knowledge: Demonstrate sufficient understanding of basic science related to the technology and be able to integrate such knowledge in his/her work.

12/08/23

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BSC BRIT

Program specific outcome of BRIT

PSO 1: Knowledge and Application of Medical Imaging Techniques

Graduates of the program will have a strong understanding of medical imaging techniques, including X-rays, CT scans, MRI scans, and Mammography, as well as their applications in diagnosing and treating medical conditions. They will be able to operate and maintain imaging equipment, apply imaging techniques to real-world medical situations, and critically evaluate medical images for diagnostic purposes.

PSO 2: Patient Care and Safety

Graduates of the program will be able to prioritize patient safety and provide patient care throughout the imaging process. They will be able to explain imaging procedures to patients and answer their questions, maintain patient confidentiality, and ensure that all imaging procedures are performed in a safe and efficient manner.

PSO 3: Professionalism and Communication

Graduates of the program will be able to communicate effectively with patients, physicians, and other healthcare professionals. They will have excellent written and oral communication skills, be able to work collaboratively with interdisciplinary teams, and demonstrate a high level of professionalism in all aspects of their work.

PSO 4: Critical Thinking and Problem Solving

Graduates of the program will be able to analyze complex medical imaging data, identify anomalies, and develop a plan of action based on the findings. They will be able to think critically and solve problems in real-world situations, including emergency situations.

PSO 5: Research and Development

Graduates of the program will have a strong foundation in research and development methodologies. They will be able to design and execute research studies, evaluate the validity of research findings, and apply research findings to improve imaging techniques and patient care.

PSO 6: Ethics and Professional Responsibility

Graduates of the program will understand the ethical and professional responsibilities associated with working in the medical imaging field. They will be able to navigate ethical dilemmas and maintain the highest level of professionalism in all aspects of their work.

12/02/23
Dr Anuradha

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BSC BRIT

COURSE OUTCOMES

Course outcomes of introduction to CT and MRI

CO-1: To study the fundamental principles and physical principles of CT and MRI imaging modalities.

CO-2: Apply knowledge of CT and MRI imaging techniques to interpret and evaluate medical images effectively.

CO-3: Evaluate the advantages and limitations of CT and MRI imaging technologies in various clinical scenarios.

CO-4: Apply ethical and safety considerations in the practice of CT and MRI imaging procedures.

CO-5: Demonstrate effective communication skills to explain CT and MRI imaging concepts and findings to patients and healthcare professionals.

Course outcome for radiation hazards and protection

CO-1: Identify the sources, types, and potential risks of radiation hazards in various settings.

CO-2: Describe the principles and methods of radiation measurement and monitoring.

CO-3: Evaluate the importance of radiation safety practices and procedures in minimizing radiation exposure.

CO-4: Assess the effectiveness of different radiation protection measures and strategies.

CO-5: Demonstrate knowledge of regulatory guidelines and standards for radiation safety and compliance.

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Course outcome for Anatomy

CO-1: Identify and describe the major anatomical structures and systems of the human body.

CO-2: Analyze the relationships and interactions between different anatomical structures and systems.

CO-3: Recognize anatomical variations and anomalies and their implications in health and disease.

CO-4: Apply anatomical knowledge to interpret and analyze medical imaging studies and clinical cases.

CO-5: Communicate effectively about anatomical concepts and findings to healthcare professionals and patients.

Course outcome for Physiology

CO-1: Demonstrate a comprehensive understanding of the principles and mechanisms underlying human physiology, including the functioning of various organ systems.

CO-2: Apply physiological concepts to analyze and interpret experimental data related to human physiology, utilizing appropriate statistical methods and scientific reasoning.

CO-3: Recognize the interdependence of different physiological systems in maintaining homeostasis and explain their roles in regulating bodily functions.

CO-4: Evaluate the impact of various internal and external factors on human physiology, such as exercise, nutrition, environmental conditions, and disease, and analyze their effects on overall health and well-being.

Dr Surya Ahuja
12/08/23

Mewar University

BSC BRIT

CO-5: Integrate theoretical knowledge of human physiology with practical skills to design and conduct experiments, accurately record data, and analyze results to draw meaningful conclusions in a scientific context

Course outcome for radiation physics

CO-1: Identify and describe the fundamental principles and theories related to radiation physics, including the properties and behavior of different types of radiation.

CO-2: Apply mathematical and quantitative methods to solve problems and analyze data relevant to radiation physics, utilizing appropriate mathematical models and techniques.

CO-3: Recognize the applications and significance of radiation physics in various fields, such as medical imaging, radiation therapy, industrial processes, and nuclear power generation.

CO-4: Evaluate the radiation hazards and safety measures associated with radiation exposure, including the principles of radiation protection and the implementation of radiation safety protocols.

CO-5: Integrate theoretical knowledge of radiation physics with practical skills to operate radiation detection and measurement equipment, analyze radiation data, and apply appropriate quality assurance techniques in radiation-related practices.

Dr Tripti Ahuja
12/02/23

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Course Outcome for Special Investigations and Pathology

CO-1: Identify and describe the various specialized investigative techniques and procedures used in pathology, such as histopathology, cytology, immunohistochemistry, and molecular diagnostics.

CO-2: Apply critical thinking skills to analyze and interpret pathological findings, including the identification and classification of abnormal tissues and cells, and correlate them with clinical presentations and disease processes.

CO-3: Recognize the importance of quality control and assurance in laboratory practices, including specimen handling, processing, and reporting, to ensure accurate and reliable pathological results.

CO-4: Evaluate the significance of pathological findings in the diagnosis, prognosis, and management of diseases, and understand their role in guiding appropriate therapeutic interventions and patient care.

CO-5: Integrate theoretical knowledge of special investigations and pathology with practical skills to perform laboratory techniques, prepare and examine specimens, and accurately record and interpret pathological data in a professional and ethical manner.

Course Outcome for Hospital practice and Care of Patient

CO-1: Demonstrate an understanding of the essential principles and concepts related to hospital practice and the care of patients, including the roles and responsibilities of healthcare professionals within a hospital setting.

CO-2: Apply critical thinking skills to assess and prioritize the healthcare needs of patients, taking into consideration factors such as medical history, current condition, and available resources.

Dr Priya Ahuja 12/04/23

MEWAR UNIVERSITY Chittorgarh-312901 (Raj.)

CO-3: Recognize and adhere to the legal and ethical standards governing patient care, including maintaining patient confidentiality, obtaining informed consent, and promoting patient autonomy and dignity.

CO-4: Evaluate and implement appropriate strategies for effective communication and collaboration with patients, their families, and interdisciplinary healthcare teams to ensure coordinated and comprehensive care.

CO-5: Integrate theoretical knowledge of hospital practice with practical skills to provide compassionate and evidence-based care to patients, including administering medications, performing basic medical procedures, and documenting patient information accurately and appropriately.

Course Outcome of the Mammography and Echocardiography

CO-1: Acquire knowledge of the fundamental principles and techniques involved in mammography and echocardiography, including the equipment, imaging modalities, and imaging procedures used in these diagnostic procedures.

CO-2: Apply critical thinking skills to evaluate and interpret mammography and echocardiography images, recognizing normal anatomy and identifying abnormalities or pathologies within the breast and heart.

CO-3: Understand the importance of patient safety and radiation protection in mammography and implement appropriate measures to minimize radiation exposure to patients and healthcare professionals.

CO-4: Recognize and adhere to ethical and professional guidelines in mammography and echocardiography, including maintaining patient confidentiality and providing compassionate and respectful care.

CO-5: Demonstrate proficiency in performing mammography and echocardiography procedures, including positioning patients, manipulating equipment, and obtaining high-quality diagnostic

12/08/23
Dr. Priyanka

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images, while ensuring patient comfort and safety.

Course Outcome of Basic Physics course

CO-1: Understand the fundamental concepts and principles of basic physics, including classical mechanics, electromagnetism, thermodynamics, and optics.

CO-2: Apply mathematical and quantitative methods to solve problems and analyze physical phenomena, utilizing appropriate mathematical models and equations.

CO-3: Recognize the applications of basic physics principles in various fields, such as engineering, technology, medicine, and environmental science.

CO-4: Evaluate the impact of physical laws and principles on everyday life and society, including their contributions to technological advancements and scientific understanding.

CO-5: Demonstrate practical skills in conducting basic physics experiments, accurately measuring physical quantities, analyzing data, and drawing meaningful conclusions, while adhering to safety protocols and ethical practices.

Course Outcome of image acquisition processing and archiving

CO-1: Demonstrate knowledge and understanding of the principles and techniques involved in image acquisition, processing, and archiving, including the equipment, software, and protocols used in these processes.

CO-2: Apply critical thinking skills to assess and optimize image acquisition parameters, ensuring high-quality images are obtained for accurate diagnostic interpretation.

CO-3: Recognize the importance of data integrity, privacy, and security in image archiving and implement appropriate measures to maintain the confidentiality and accessibility of patient imaging data.

CO-4: Understand the ethical and legal considerations surrounding image acquisition, processing, and archiving, including patient consent, data protection regulations, and compliance with industry standards.

Dr Anjali Ahuja
12/08/23

MEWAR UNIVERSITY (Raj.) Chittorgarh

CO-5: Demonstrate proficiency in utilizing image processing software and tools to enhance and analyze medical images, accurately documenting and archiving images and associated data in a systematic and organized manner.

Course Outcome of English language and general awareness

CO-1: Acquire a solid foundation in English language and grammar, including the rules of syntax, vocabulary, and sentence structure, to effectively communicate and comprehend written and spoken English.

CO-2: Demonstrate an understanding of various literary genres, such as poetry, prose, and drama, and analyze literary works in terms of their themes, characters, and literary techniques.

CO-3: Recognize the cultural, historical, and social contexts in which English language and literature have evolved, and appreciate the contributions of English-speaking countries to global literature and culture.

CO-4: Evaluate and interpret a variety of texts, including articles, essays, and literary works, to extract relevant information, identify main ideas, and critically analyze the content.

CO-5: Apply language skills and awareness to engage in effective written and oral communication, including writing essays, delivering presentations, and participating in discussions, while demonstrating appropriate language usage and clarity of expression.

Course Outcome of environmental studies

CO-1: Develop an understanding of the fundamental concepts and principles of environmental studies, including the interconnections between the environment, society, and sustainable development.

CO-2: Recognize and assess the impact of human activities on the environment, including pollution, deforestation, climate change, and depletion of natural resources.

CO-3: Identify and analyze environmental challenges and issues at local, regional, and global levels, and explore potential solutions and strategies for environmental conservation and sustainable development.

Dr Arya Ak
12/08/23

MEWAR UNIVERSITY

CO-4: Understand the importance of environmental laws, regulations, and policies, and their role in promoting environmental protection, conservation, and the sustainable use of resources.

CO-5: Apply critical thinking skills to evaluate the environmental implications of personal choices and collective actions, and demonstrate a commitment to practicing environmentally responsible behaviors in daily life and professional endeavors..

Course Outcome of Fundamental of computer science

CO-1: Acquire a solid foundation in the fundamental principles and concepts of computer science, including algorithms, data structures, programming languages, and computer architecture.

CO-2: Recognize and analyze real-world problems, and design and implement efficient and effective algorithms to solve them using appropriate programming languages and tools.

CO-3: Understand the basics of computer networks and systems, including network protocols, internet architecture, and the role of operating systems in managing computer resources.

CO-4: Evaluate and apply software engineering principles and practices, including software development life cycle, testing, debugging, and documentation, to develop reliable and maintainable computer programs.

CO-5: Demonstrate proficiency in programming and problem-solving skills, and effectively apply computational thinking to solve complex problems, while adhering to ethical and professional standards in computer science.

Course Outcome of Magnetic resonance imaging basic principle and technique

CO-1: Demonstrate a comprehensive understanding of the basic principles and theories underlying magnetic resonance imaging (MRI), including the principles of magnetism, nuclear magnetic resonance, and signal acquisition.

CO-2: Recognize and explain the different components and functions of an MRI system, including the magnet, gradient coils, radiofrequency coils, and image reconstruction techniques.

Dr Jui Ahuja
12/10/23

MEWAR UNIVERSITY Chittorgarh-3

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CO-3: Understand the various MRI imaging sequences and protocols used for different anatomical regions, pathological conditions, and clinical applications.

CO-4: Evaluate and interpret MRI images, identifying normal anatomy, pathological findings, and artifacts, while considering factors such as contrast, resolution, and image quality.

CO-5: Apply theoretical knowledge of MRI principles and techniques to practical settings, including patient positioning, sequence selection, parameter adjustment, and acquisition optimization, while ensuring patient safety and comfort.

Course Outcome of Computed Tomography Basic principle and Technique

CO-1: Demonstrate a comprehensive understanding of the basic principles and theories underlying computed tomography (CT), including the principles of X-ray attenuation, data acquisition, and image reconstruction.

CO-2: Recognize and describe the components and functions of a CT system, including the X-ray tube, detectors, gantry, and computer systems used in CT imaging.

CO-3: Understand the various CT imaging protocols and techniques used for different anatomical regions, clinical indications, and imaging modalities (such as contrast-enhanced CT or CT angiography).

CO-4: Evaluate and interpret CT images, identifying anatomical structures, pathological findings, and artifacts, while considering factors such as contrast, spatial resolution, and image quality.

CO-5: Apply theoretical knowledge of CT principles and techniques to practical scenarios, including patient positioning, protocol selection, parameter adjustment, and image acquisition optimization, while ensuring patient safety and comfort.

Dr Preeti
12/02/23

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Mewar University

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Course Outcome of Nuclear Medicine and PET scan

CO-1: Understand the fundamental principles and concepts of nuclear medicine and positron emission tomography (PET), including the physics of radioactive decay, radiopharmaceuticals, and the detection and imaging of radiation emissions.

CO-2: Recognize and describe the different imaging procedures and techniques used in nuclear medicine and PET, including planar imaging, SPECT (single-photon emission computed tomography), and PET/CT (positron emission tomography/computed tomography) fusion imaging.

CO-3: Analyze and interpret nuclear medicine and PET images, recognizing normal and abnormal findings, and correlating them with clinical information and patient history.

CO-4: Evaluate and apply radiation safety practices and protocols, including proper handling, storage, and disposal of radiopharmaceuticals, and ensuring appropriate radiation protection measures for patients, healthcare personnel, and the general public.

CO-5: Apply theoretical knowledge of nuclear medicine and PET principles and techniques to practical scenarios, including radiopharmaceutical administration, image acquisition, reconstruction, and interpretation, while adhering to quality control measures and maintaining patient comfort and safety.

Dr. Surabhi
12/08/23

MEWAR UNIVERSITY Chittorgarh-312901 (Raj.)

Mewar university

B.Sc. Cardiac Care Technology

Programme Outcomes

PO-1 Knowledge and Skills Acquisition: Upon completion of the program, graduates of the cardiac care technology program will have acquired comprehensive knowledge and skills in cardiac anatomy and physiology, diagnostic procedures, pharmacology, and therapeutic interventions.

PO-2 Clinical Competency: Graduates will have acquired sufficient clinical experience and competency to effectively assess, diagnose, and treat a range of cardiac disorders.

PO-3 Professional Ethics: Graduates will demonstrate ethical and professional conduct in their interactions with patients, families, healthcare professionals, and the wider community.

PO-4. Communication and Interpersonal Skills: Graduates will have acquired effective communication and interpersonal skills to effectively collaborate with healthcare professionals, patients, and their families.

PO-5 Critical Thinking and Problem-Solving Skills: Graduates will have developed critical thinking and problem-solving skills that enable them to analyze complex cardiac care problems, develop appropriate solutions, and make sound clinical decisions.

PO-6 Patient-Centered Care: Graduates will demonstrate a patient-centered approach to care delivery, recognizing the unique needs and preferences of each patient, and providing compassionate, culturally sensitive care.

PO-7 . Technological Competency: Graduates will have acquired technological competency to utilize a range of medical equipment and technology to enhance patient care and support clinical decision-making.

PO-8 Continuous Learning and Professional Development: Graduates will be committed to continuous learning and professional development, keeping up-to-date with the latest cardiac care advancements, and participating in ongoing professional education.

Dr Tyagi Atul
12/04/23

Mewar university

B.Sc. Cardiac Care Technology

PO-9 Leadership and Teamwork: Graduates will demonstrate leadership and teamwork skills, effectively leading healthcare teams, managing resources, and providing guidance and support to colleagues.

PO-10 Positive Impact on Society: Graduates of the cardiac care technology program will make a positive impact on society by providing high-quality, patient-centered cardiac care, contributing to improved health outcomes, and promoting health education and awareness in the community.

Dr Jaiya Aug
12/08/23

Mewar university

B.Sc. Cardiac Care Technology

Program specific outcomes

PSO-1 Understanding the anatomy and physiology of the cardiovascular system: Students will develop a deep understanding of the structure and function of the heart, blood vessels, and circulatory system.

PSO-2 Knowledge of cardiovascular diseases: Students will learn about common cardiovascular conditions, including coronary artery disease, heart failure, arrhythmias, and valve disorders.

PSO-3 Understanding of diagnostic procedures: Students will learn about the various diagnostic procedures used to diagnose cardiovascular diseases, such as electrocardiography (ECG)

PSO-4 Administering medications, monitoring patients during procedures, and assisting with invasive procedures like cardiac catheterization.

PSO-5 Knowledge of treatment options: Students will learn about the various treatment options for cardiovascular diseases, including lifestyle modifications, medications, and invasive procedures such as angioplasty and bypass surgery.

Dr Priya Ojha 12/06/23

Mewar university

B.Sc. Cardiac Care Technology

Course Outcomes

Course - Human Anatomy (Theory)

CO-1: Demonstrate knowledge of the anatomical structures and functions of the human body.

CO-2: Analyze and describe the interrelationships between different anatomical systems and their contribution to overall human health.

CO-3: Apply critical thinking skills to identify and interpret anatomical variations and abnormalities.

CO-4: Utilize appropriate anatomical terminology to communicate effectively with healthcare professionals and accurately document anatomical findings.

CO-5: Apply ethical principles and professional standards when handling human anatomical specimens and conducting anatomical investigations.

Course - Human Anatomy (Practical)

CO-1: Demonstrate an in-depth knowledge and understanding of the anatomical structure and organization of the human body.

CO-2: Apply appropriate anatomical terminology and accurately identify the major anatomical structures and systems of the human body.

CO-3: Perform dissections and use laboratory techniques effectively to explore and investigate anatomical structures.

CO-4: Analyze and interpret anatomical variations and anomalies in human specimens.

CO-5: Develop skills in scientific observation, data collection, and presentation through practical exercises in human anatomy.

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B.Sc. Cardiac Care Technology

Course - Human Physiology (Theory)

CO-1: Demonstrate a comprehensive understanding of the structure and function of various human body systems, including the cardiovascular, respiratory, nervous, musculoskeletal, and digestive systems.

CO-2: Apply knowledge of human physiology to analyze and interpret physiological processes and mechanisms underlying normal body functions and homeostasis.

CO-3: Evaluate the impact of various factors, such as diet, exercise, and environmental conditions, on human physiology and its adaptations.

CO-4: Apply principles of human physiology to assess and interpret diagnostic tests and measurements used in the field of medical laboratory technology.

CO-5: Demonstrate the ability to communicate effectively and professionally about human physiology concepts, both orally and in written form, using appropriate terminology and scientific evidence.

Course - Human Physiology (Practical)

CO-1: Apply theoretical knowledge of human physiology to practical scenarios by conducting experiments and analyzing physiological parameters accurately.

CO-2: Demonstrate proficiency in using laboratory equipment and techniques for measuring physiological variables, such as blood pressure, heart rate, respiratory rate, and body temperature.

CO-3: Acquire practical skills in conducting various physiological tests, including ECG (electrocardiogram), spirometry, pulse oximetry, and urine analysis, with accuracy and precision.

CO-4: Analyze and interpret experimental data obtained during physiological experiments, and effectively communicate the results through written reports and presentations.

CO-5: Develop critical thinking and problem-solving abilities by identifying and troubleshooting technical issues that may arise during physiological experiments, ensuring accurate and reliable results.

Dr Jyoti Bhatt 12/08/23

Mewar university

B.Sc. Cardiac Care Technology

Course - Biochemistry (Theory)

CO-1: Demonstrate a comprehensive understanding of the fundamental principles and concepts of biochemistry, including the structure and function of biomolecules, metabolic pathways, and cellular processes.

CO-2: Apply theoretical knowledge of biochemistry to perform laboratory techniques and experiments, including the analysis and interpretation of biochemical data.

CO-3: Critically analyze and evaluate scientific literature related to biochemistry, and effectively communicate scientific information through oral and written presentations.

CO-4: Apply ethical principles and professional standards in conducting biochemistry research, emphasizing the importance of integrity, safety, and responsible use of laboratory resources.

CO-5: Demonstrate the ability to work collaboratively in a team setting, effectively communicate and exchange ideas, and contribute to problem-solving in the field of biochemistry.

Course - Biochemistry (Practical)

CO-1: Apply laboratory techniques and protocols to perform biochemical analyses accurately and safely.

CO-2: Demonstrate proficiency in handling laboratory equipment and instruments used in biochemistry experiments.

CO-3: Analyze and interpret experimental data obtained from biochemical assays and experiments.

CO-4: Develop skills in documenting and reporting experimental procedures, results, and observations in a scientific manner.

CO-5: Apply ethical principles and professional conduct while working in a biochemistry laboratory setting.

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B.Sc. Cardiac Care Technology

Course - Microbiology(serology, immunology, parasitology) Theory

CO-1: Demonstrate a comprehensive understanding of the principles and techniques used in serology, immunology, and parasitology within the field of Microbiology.

CO-2: Apply the acquired knowledge of serology, immunology, and parasitology to analyze and interpret laboratory results effectively.

CO-3: Develop practical skills in performing serological tests, immunological assays, and parasitological examinations following standard laboratory protocols.

CO-4: Demonstrate the ability to critically evaluate and assess the significance of serological, immunological, and parasitological findings in diagnosing infectious diseases.

CO-5: Apply ethical considerations and safety protocols while working with infectious agents and handling laboratory specimens during serological, immunological, and parasitological investigations.

Course - Microbiology (serology, immunology, parasitology) Practical

CO-1: Demonstrate proficiency in performing serological tests and interpreting the results accurately.

CO-2: Apply theoretical knowledge of immunology to perform various immunological tests and analyze the obtained data.

CO-3: Apply practical skills and techniques to identify and characterize various parasites and their life cycles.

CO-4: Demonstrate competence in handling and maintaining laboratory equipment, including microscopes and centrifuges, for microbiological and parasitological investigations.

CO-5: Develop the ability to document and report laboratory findings accurately and effectively, following standard protocols and procedures.

12/10/23

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B.Sc. Cardiac Care Technology

Course - Pathology (Theory)

CO-1: Analyze the fundamental principles and concepts of pathology in order to understand the mechanisms of diseases and their effects on the human body.

CO-2: Apply diagnostic techniques and procedures effectively to identify and evaluate various pathological conditions and diseases.

CO-3: Interpret laboratory results and diagnostic reports accurately to provide relevant information for disease diagnosis and treatment.

CO-4: Demonstrate knowledge of different treatment modalities and interventions used in pathology to contribute to the effective management of diseases.

CO-5: Evaluate ethical and professional guidelines in the practice of pathology, demonstrating a commitment to patient care, confidentiality, and quality assurance.

Course - Pathology (Practical)

CO-1: Demonstrate proficiency in performing various laboratory techniques and procedures used in pathology diagnosis.

CO-2: Apply theoretical knowledge to effectively analyze and interpret pathological specimens, including blood, tissue, and body fluid samples.

CO-3: Develop competence in operating and maintaining laboratory equipment and instruments required for pathology investigations.

CO-4: Apply appropriate safety protocols and ethical guidelines while handling and disposing of pathological specimens and hazardous materials.

CO-5: Communicate pathology findings accurately and effectively through written reports, graphical representations, and oral presentations.

12/08/23
Dr Anju Ahuja

Mewar university

B.Sc. Cardiac Care Technology

Course -Pharmacology

CO-1: Demonstrate a comprehensive understanding of the principles and concepts of pharmacology, including the mechanisms of drug action, pharmacokinetics, and pharmacodynamics.

CO-2: Analyze and evaluate the therapeutic uses, adverse effects, and interactions of commonly used drugs in various disease states.

CO-3: Apply pharmacological knowledge to make informed decisions regarding drug selection, dosing, and monitoring in patient care.

CO-4: Critically assess research literature and scientific evidence related to pharmacology to inform evidence-based practice and drug therapy recommendations.

CO-5: Demonstrate effective communication skills in discussing pharmacological principles, drug information, and patient education to healthcare professionals and patients.

Course- Psychology and sociology

CO-1: Demonstrate an understanding of the fundamental concepts and theories in psychology and sociology.

CO-2: Apply research methods and techniques to investigate psychological and sociological phenomena.

CO-3: Analyze the impact of social, cultural, and environmental factors on individual and group behavior.

CO-4: Evaluate the ethical considerations and implications in psychological and sociological research.

CO-5: Communicate effectively, both orally and in writing, about psychological and sociological concepts and findings.

Dr. Tripti Ahuja
12/08/23

Mewar university

B.Sc. Cardiac Care Technology

Course -Basic cardiac care technology

CO-1: Demonstrate a comprehensive understanding of the anatomy and physiology of the cardiovascular system and its relevance to cardiac care technology.

CO-2: Apply theoretical knowledge and practical skills to accurately perform basic cardiac diagnostic procedures, such as electrocardiography (ECG) and stress testing, under the supervision of a healthcare professional.

CO-3: Utilize appropriate equipment and technologies to monitor cardiac patients, interpret cardiac data, and identify abnormalities or changes in cardiac functioning.

CO-4: Implement effective communication strategies and ethical principles when interacting with patients, their families, and the healthcare team in a cardiac care setting.

CO-5: Demonstrate an understanding of emergency cardiac care procedures, including cardiopulmonary resuscitation (CPR), and contribute to the efficient and coordinated response in cardiac emergencies.

Course- Environmental science

CO-1: Identify and explain the fundamental principles and concepts of environmental science.

CO-2: Evaluate the interrelationships between human activities and the environment, and recognize the impacts of human actions on ecosystems.

CO-3: Apply scientific methods and techniques to collect and analyze environmental data for the purpose of problem-solving and decision-making.

CO-4: Demonstrate an understanding of the environmental challenges facing society, including pollution, climate change, biodiversity loss, and resource depletion.

CO-5: Propose and communicate sustainable solutions to environmental issues, taking into account scientific, social, and ethical considerations.

12/08/23

Mewar university

B.Sc. Cardiac Care Technology

Course-Basic patient care

CO-1: Demonstrate knowledge of basic patient care techniques.

CO-2: Apply principles of infection control in patient care settings.

CO-3: Communicate effectively with patients, families, and healthcare professionals.

CO-4: Demonstrate proficiency in basic medical procedures, such as vital signs measurement and medication administration.

CO-5: Practice ethical and compassionate patient care while respecting cultural and individual differences.

Course -Basic cardiac evaluation

CO-1: Recognize and explain the anatomy and physiology of the cardiovascular system.

CO-2: Apply appropriate techniques to perform a basic cardiac evaluation, including taking a patient's history, conducting physical examinations, and interpreting diagnostic tests.

CO-3: Identify and differentiate common cardiac conditions, such as arrhythmias, heart failure, and valvular disorders, based on clinical findings and diagnostic results.

CO-4: Develop and implement appropriate treatment plans and interventions for patients with cardiovascular conditions, considering evidence-based guidelines and patient-specific factors.

CO-5: Communicate effectively with patients, their families, and healthcare professionals regarding cardiac evaluation findings, treatment options, and prognosis, demonstrating empathy and cultural sensitivity.

12/08/23
Dr Fulia Ahuja

Mewar university

B.Sc. Cardiac Care Technology

Course - Basics of medical disorders

CO-1: Identify and describe common medical disorders.

CO-2: Analyze the etiology and pathophysiology of medical disorders.

CO-3: Apply appropriate diagnostic methods and techniques for identifying medical disorders.

CO-4: Evaluate treatment options and interventions for medical disorders.

CO-5: Demonstrate an understanding of preventive measures and management strategies for medical disorders.

Course- fundamental of computer science

CO-1: Analyze fundamental concepts of computer science.

CO-2: Apply problem-solving techniques using algorithms and data structures.

CO-3: Design and develop computer programs using programming languages.

CO-4: Demonstrate an understanding of computer organization and architecture.

CO-5: Apply principles of software engineering to develop efficient and reliable software systems.

Dr Arun Ahuja
12/02/24

Mewar university

B.Sc. Cardiac Care Technology

Course - Basic cardiac evaluation and therapies

CO-1: Identify and describe the anatomy and physiology of the cardiovascular system, including the structure and function of the heart, blood vessels, and conduction system.

CO-2: Demonstrate proficiency in performing basic cardiac evaluation techniques, such as measuring blood pressure, assessing heart sounds, and interpreting electrocardiograms (ECGs).

CO-3: Evaluate common cardiac conditions and recognize the signs and symptoms associated with them, including myocardial infarction, heart failure, and arrhythmias.

CO-4: Apply knowledge of cardiac pharmacology to select and administer appropriate medications for the treatment of cardiovascular disorders, considering factors such as dosage, route of administration, and potential side effects.

CO-5: Formulate and implement basic cardiac therapeutic interventions, including cardiopulmonary resuscitation (CPR), defibrillation, and the administration of emergency medications, in order to respond effectively to cardiac emergencies.

Course -coronary angiography

CO-1: Identify and describe the anatomy and physiology of the cardiovascular system relevant to coronary angiography.

CO-2: Apply the principles of radiation safety and protection during coronary angiography procedures.

CO-3: Demonstrate the ability to operate and calibrate the equipment used in coronary angiography accurately.

CO-4: Interpret coronary angiography images and recognize various cardiovascular pathologies and anomalies.

12/02/23
Dr Priya Ahuja

CO-5: Develop effective communication and patient care skills to ensure optimal patient experience during coronary angiography procedures.

Course - Research and Bio-statistics

CO-1: Demonstrate an understanding of the fundamental concepts and principles of research methodology and statistical analysis in the field of biostatistics

CO-2: Apply appropriate statistical techniques and software tools to analyze research data and interpret the results accurately in the context of bio-statistical studies.

CO-3: Design and execute research projects in the field of biostatistics, including formulating research questions, selecting appropriate study designs, and collecting relevant data.

CO-4: Critically evaluate scientific literature in biostatistics and research studies, identify strengths and weaknesses, and effectively communicate the findings to both technical and non-technical audiences.

CO-5: Demonstrate ethical conduct in research practices, including understanding the principles of research ethics, protecting human subjects, and maintaining integrity in data collection, analysis, and reporting.

Course Outcome of cardiac care technology - clinical

CO-1: Recognize the signs and symptoms of cardiovascular disease.

CO-2 Utilize diagnostic tests and procedures to identify cardiovascular disease and its severity.

CO-3 Administer medications and other treatments to manage cardiovascular disease.

.CO-4 Perform and interpret electrocardiograms (ECGs) and other cardiac monitoring tests.

CO-5 Identify and respond to emergency situations in a cardiac care setting.

Dr Fulaf Ahuja
12/08/23

Mewar university

B.Sc. Cardiac Care Technology

Course -cardiac care technology - Applied

CO-1: Demonstrate a comprehensive understanding of cardiac anatomy and physiology, including the structure and function of the heart, blood vessels, and related systems.

CO-2: Apply theoretical knowledge and practical skills to operate and maintain cardiac diagnostic equipment effectively, ensuring accurate monitoring and assessment of cardiac conditions.

CO-3: Employ critical thinking and problem-solving abilities to analyze cardiac test results, interpret findings, and provide appropriate recommendations for patient care and treatment plans.

CO-4: Apply ethical and professional standards when working in a cardiac care team, maintaining patient confidentiality, respecting cultural diversity, and promoting patient-centered care.

CO-5: Demonstrate effective communication skills to interact with patients, their families, and healthcare professionals, ensuring clear and accurate exchange of information regarding cardiac care procedures, test results, and treatment plans.

Course - Basic intensive care

CO-1: Demonstrate knowledge and understanding of the fundamental principles and concepts related to basic intensive care in the BCCT program.

CO-2: Apply critical thinking and problem-solving skills to assess and manage patients requiring basic intensive care interventions.

CO-3: Develop proficiency in utilizing various medical equipment and technologies used in basic intensive care settings.

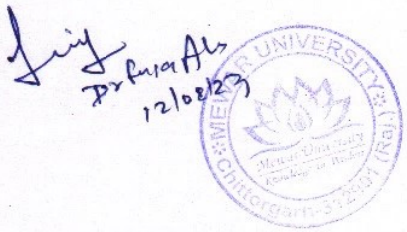
CO-4: Communicate effectively and collaborate with interdisciplinary healthcare teams to provide comprehensive and coordinated care to patients in basic intensive care.

Dr Brijraj Ahir
13/08/23

Mewar university

B.Sc. Cardiac Care Technology

CO-5: Demonstrate ethical and professional behavior while adhering to legal and regulatory standards in the delivery of basic intensive care services.



MEWAR UNIVERSITY

B.sc Medical lab technology

PROGRAMME OUTCOMES

After completing this programme, learner will be able to:

PO 1: Diagnostic Proficiency: Graduates will perform a wide range of laboratory tests with precision and accuracy, contributing to the timely and accurate diagnosis of medical conditions.

PO 2: Quality Assurance: Graduates will implement rigorous quality control measures, adhere to standard operating procedures, and maintain the highest standards of laboratory practice to ensure reliable and consistent results.

PO 3: Technological Expertise: Graduates will be adept at utilizing advanced laboratory instruments and technologies, staying updated with the latest advancements to enhance diagnostic capabilities.

PO 4: Data Analysis and Interpretation: Graduates will analyze and interpret laboratory data, correlating results with clinical information to provide valuable insights for patient care and treatment.

PO 5: Collaborative Healthcare: Graduates will effectively communicate with healthcare professionals, contributing vital diagnostic information to interdisciplinary healthcare teams.

PO 6: Ethical Practice: Graduates will uphold ethical principles and patient confidentiality, demonstrating integrity and professionalism in handling sensitive medical information.

PO 7: Continuing Education: Graduates will engage in lifelong learning, keeping abreast of evolving medical practices and technologies to continuously enhance their knowledge and skills.

PO 8: Health and Safety: Graduates will prioritize health and safety in the laboratory, following protocols to minimize risks, protect themselves, colleagues, and patients from potential hazards.

12/08/23

PO 9: Public Health Contribution: Graduates will play a crucial role in disease surveillance, outbreak investigations, and public health initiatives, contributing to disease prevention and control.

PO 10: Cultural Sensitivity: Graduates will demonstrate cultural competence in working with diverse patient populations, respecting individual beliefs and values.

PO 11: Research and Innovation: Graduates will have a foundation in research methodologies, enabling them to contribute to advancements in diagnostic techniques and medical technology.

PO 12: By achieving this programme outcome: -Graduates of the Medical Laboratory Technology program will serve as essential pillars of the healthcare system, providing accurate diagnostic information, supporting patient care, and contributing to the overall well-being of individuals and communities.

MEWAR UNIVERSITY

B.sc Medical lab technology

PROGRAM SPECIFIC OUTCOMES

PSO1: Graduates will expertly prepare and interpret histopathological specimens, contributing to accurate disease identification and playing a vital role in patient diagnosis and care.

PSO2: Upon completion, graduates will skilfully identify and analyze microorganisms, aiding in the accurate diagnosis and management of infectious diseases and contributing to public health initiatives.

PSO3: Upon completion, graduates will proficiently analyze biochemical components in patient samples, enabling the accurate diagnosis and monitoring of various medical conditions, and contributing to effective patient care.

Dr Jyoti Arya
12/08/23

MEWAR UNIVERSITY Chittorgarh-312901

MEWAR UNIVERSITY

B.sc Medical lab technology

Course outcomes

Course - Human Anatomy (Theory)

CO-1: Demonstrate knowledge of the anatomical structures and functions of the human body.

CO-2: Analyze and describe the interrelationships between different anatomical systems and their contribution to overall human health.

CO-3: Apply critical thinking skills to identify and interpret anatomical variations and abnormalities.

CO-4: Utilize appropriate anatomical terminology to communicate effectively with healthcare professionals and accurately document anatomical findings.

CO-5: Apply ethical principles and professional standards when handling human anatomical specimens and conducting anatomical investigations.

Course - Human Anatomy (Practical)

CO-1: Demonstrate an in-depth knowledge and understanding of the anatomical structure and organization of the human body.

CO-2: Apply appropriate anatomical terminology and accurately identify the major anatomical structures and systems of the human body.

CO-3: Perform dissections and use laboratory techniques effectively to explore and investigate anatomical structures.

CO-4: Analyze and interpret anatomical variations and anomalies in human specimens.

CO-5: Develop skills in scientific observation, data collection, and presentation through practical exercises in human anatomy.

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MEWAR UNIVERSITY

B.sc Medical lab technology

Course - Human Physiology (Theory)

CO-1: Demonstrate a comprehensive understanding of the structure and function of various human body systems, including the cardiovascular, respiratory, nervous, musculoskeletal, and digestive systems.

CO-2: Apply knowledge of human physiology to analyze and interpret physiological processes and mechanisms underlying normal body functions and homeostasis.

CO-3: Evaluate the impact of various factors, such as diet, exercise, and environmental conditions, on human physiology and its adaptations.

CO-4: Apply principles of human physiology to assess and interpret diagnostic tests and measurements used in the field of medical laboratory technology.

CO-5: Demonstrate the ability to communicate effectively and professionally about human physiology concepts, both orally and in written form, using appropriate terminology and scientific evidence.

Course - Human Physiology (Practical)

CO-1: Apply theoretical knowledge of human physiology to practical scenarios by conducting experiments and analyzing physiological parameters accurately.

CO-2: Demonstrate proficiency in using laboratory equipment and techniques for measuring physiological variables, such as blood pressure, heart rate, respiratory rate, and body temperature.

CO-3: Acquire practical skills in conducting various physiological tests, including ECG (electrocardiogram), spirometry, pulse oximetry, and urine analysis, with accuracy and precision.

CO-4: Analyze and interpret experimental data obtained during physiological experiments, and effectively communicate the results through written reports and presentations.

CO-5: Develop critical thinking and problem-solving abilities by identifying and troubleshooting technical issues that may arise during physiological experiments, ensuring accurate and reliable results.

12/08/23.
Dr Fuja Ahmed

MEWAR UNIVERSITY

B.sc Medical lab technology

Course - Biochemistry (Theory)

CO-1: Demonstrate a comprehensive understanding of the fundamental principles and concepts of biochemistry, including the structure and function of biomolecules, metabolic pathways, and cellular processes.

CO-2: Apply theoretical knowledge of biochemistry to perform laboratory techniques and experiments, including the analysis and interpretation of biochemical data.

CO-3: Critically analyze and evaluate scientific literature related to biochemistry, and effectively communicate scientific information through oral and written presentations.

CO-4: Apply ethical principles and professional standards in conducting biochemistry research, emphasizing the importance of integrity, safety, and responsible use of laboratory resources.

CO-5: Demonstrate the ability to work collaboratively in a team setting, effectively communicate and exchange ideas, and contribute to problem-solving in the field of biochemistry.

Course - Biochemistry (Practical)

CO-1: Apply laboratory techniques and protocols to perform biochemical analyses accurately and safely.

CO-2: Demonstrate proficiency in handling laboratory equipment and instruments used in biochemistry experiments.

CO-3: Analyze and interpret experimental data obtained from biochemical assays and experiments.

CO-4: Develop skills in documenting and reporting experimental procedures, results, and observations in a scientific manner.

CO-5: Apply ethical principles and professional conduct while working in a biochemistry laboratory setting.

Dr Rijja Ahuj
12/08/23.

MEWAR UNIVERSITY

B.sc Medical lab technology

Course - Microbiology (serology, immunology, parasitology) Theory

CO-1: Demonstrate a comprehensive understanding of the principles and techniques used in serology, immunology, and parasitology within the field of Microbiology.

CO-2: Apply the acquired knowledge of serology, immunology, and parasitology to analyze and interpret laboratory results effectively.

CO-3: Develop practical skills in performing serological tests, immunological assays, and parasitological examinations following standard laboratory protocols.

CO-4: Demonstrate the ability to critically evaluate and assess the significance of serological, immunological, and parasitological findings in diagnosing infectious diseases.

CO-5: Apply ethical considerations and safety protocols while working with infectious agents and handling laboratory specimens during serological, immunological, and parasitological investigations.

Course - Microbiology (serology, immunology, parasitology) Practical

CO-1: Demonstrate proficiency in performing serological tests and interpreting the results accurately.

CO-2: Apply theoretical knowledge of immunology to perform various immunological tests and analyze the obtained data.

CO-3: Apply practical skills and techniques to identify and characterize various parasites and their life cycles.

CO-4: Demonstrate competence in handling and maintaining laboratory equipment, including microscopes and centrifuges, for microbiological and parasitological investigations.

CO-5: Develop the ability to document and report laboratory findings accurately and effectively, following standard protocols and procedures.

12/06/23

MEWAR UNIVERSITY

B.sc Medical lab technology

Course - Pathology (Theory)

CO-1: Analyze the fundamental principles and concepts of pathology in order to understand the mechanisms of diseases and their effects on the human body.

CO-2: Apply diagnostic techniques and procedures effectively to identify and evaluate various pathological conditions and diseases.

CO-3: Interpret laboratory results and diagnostic reports accurately to provide relevant information for disease diagnosis and treatment.

CO-4: Demonstrate knowledge of different treatment modalities and interventions used in pathology to contribute to the effective management of diseases.

CO-5: Evaluate ethical and professional guidelines in the practice of pathology, demonstrating a commitment to patient care, confidentiality, and quality assurance.

Course - Pathology (Practical)

CO-1: Demonstrate proficiency in performing various laboratory techniques and procedures used in pathology diagnosis.

CO-2: Apply theoretical knowledge to effectively analyze and interpret pathological specimens, including blood, tissue, and body fluid samples.

CO-3: Develop competence in operating and maintaining laboratory equipment and instruments required for pathology investigations.

CO-4: Apply appropriate safety protocols and ethical guidelines while handling and disposing of pathological specimens and hazardous materials.

CO-5: Communicate pathology findings accurately and effectively through written reports, graphical representations, and oral presentations.

Dr Tyagi 12/08/23

MEWAR UNIVERSITY

B.sc Medical lab technology

Course - Research & bio-Statistics (Theory)

CO-1: Analyze and evaluate various research methodologies used in Biomedical Laboratory Technology (BMLT) to investigate and address scientific questions and problems.

CO-2: Apply ethical principles and guidelines in the design, execution, and reporting of research studies in the field of Biomedical Laboratory Technology.

CO-3: Demonstrate proficiency in data collection, analysis, and interpretation techniques relevant to BMLT research, including statistical analysis and experimental design.

CO-4: Critically evaluate scientific literature and research findings in the field of Biomedical Laboratory Technology to make informed decisions and contribute to advancements in the discipline.

CO-5: Communicate research findings effectively through written reports, presentations, and scientific publications in the context of Biomedical Laboratory Technology.

Course - Research & bio-Statistics (Practical)

CO-1: Apply statistical methods to analyze and interpret data in the field of biomedical research.

CO-2: Design and implement appropriate research methodologies for collecting data in the field of biomedical sciences.

CO-3: Evaluate and critically assess scientific literature and research studies in the context of bio-statistical analysis.

CO-4: Demonstrate proficiency in using statistical software and tools to analyze and visualize data in the field of biomedical research.

CO-5: Communicate research findings effectively through written reports and presentations, incorporating appropriate statistical analysis and interpretation.

12/08/22

MEWAR UNIVERSITY

B.sc Medical lab technology

Course - Computer application Includes MS – Office (Theory)

CO-1: Demonstrate proficiency in utilizing various components of Microsoft Office suite, including Word, Excel, PowerPoint, and Access, for creating and managing documents, spreadsheets, presentations, and databases.

CO-2: Apply fundamental concepts and principles of computer applications to solve real-world problems using MS-Office tools.

CO-3: Analyze and evaluate data using advanced features of MS-Excel, such as formulas, functions, charts, and data analysis tools, to make informed business decisions.

CO-4: Design visually appealing and effective presentations using MS-PowerPoint, incorporating multimedia elements and employing effective presentation techniques.

CO-5: Develop and manage databases using MS-Access, including creating tables, forms, queries, and reports, to organize and retrieve data efficiently.

Course - Computer application Includes MS – Office (Practical

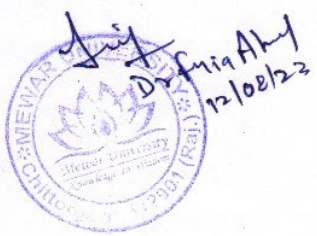
CO-1: Demonstrate proficiency in utilizing MS-Office applications for effective data management.

CO-2: Create professional documents using MS-Word, including formatting, tables, and advanced features like mail merge.

CO-3: Develop effective spreadsheets using MS-Excel, including formulas, functions, data analysis, and chart creation.

CO-4: Design impactful presentations using MS-PowerPoint, incorporating multimedia elements, animations, and slide transitions.

CO-5: Utilize MS-Access to create and manage databases, including table creation, data entry, querying, and generating reports.



MEWAR UNIVERSITY

B.sc Medical lab technology

Course - English (Theory)

CO-1: Analyze and interpret various forms of literature, including prose, poetry, and drama, demonstrating a critical understanding of literary techniques, themes, and cultural contexts.

CO-2: Apply effective communication skills in both written and oral forms, demonstrating proficiency in grammar, vocabulary, and rhetoric, to express ideas and arguments clearly and persuasively.

CO-3: Evaluate and utilize appropriate research methods and resources to gather relevant information, analyze literary texts, and support arguments with credible evidence.

CO-4: Demonstrate an understanding of the historical development of the English language, including its major periods and significant linguistic changes, and apply this knowledge to analyze and interpret texts from different eras.

CO-5: Engage in cross-cultural and interdisciplinary literary studies, exploring the connections between literature, society, and other disciplines, and demonstrating an awareness of diverse perspectives and global issues.

Course - Instrumentation and technique (Theory)

CO-1: Identify and explain the fundamental principles and concepts of instrumentation used in medical laboratory technology.

CO-2: Analyze and describe the various techniques employed in medical laboratory instrumentation, such as spectrophotometry, chromatography, and electrophoresis.

CO-3: Apply theoretical knowledge to effectively operate and maintain common laboratory instruments, including automated analyzers and diagnostic equipment.

CO-4: Evaluate and interpret experimental data obtained from different instrumentation methods, demonstrating the ability to troubleshoot and ensure accuracy of results.

CO-5: Demonstrate a comprehensive understanding of safety protocols and quality control measures associated with medical laboratory instrumentation, ensuring compliance with standard operating procedures and regulatory guidelines.

12/08/23

MEWAR UNIVERSITY

B.sc Medical lab technology

Course -Health Care (Theory)

CO-1: Analyze the fundamental principles and concepts of health care management in the context of the BMLT (Bachelor of Medical Laboratory Technology) program.

CO-2: Evaluate the ethical considerations and legal aspects associated with health care practices in the BMLT field.

CO-3: Demonstrate a comprehensive understanding of medical laboratory techniques, procedures, and instrumentation used in health care settings.

CO-4: Apply critical thinking and problem-solving skills to analyze and interpret medical laboratory data accurately.

CO-5: Communicate effectively, both orally and in writing, with healthcare professionals and patients in a culturally sensitive and compassionate manner.

Course - Environment and Health (Theory)

CO-1: Demonstrate a comprehensive understanding of the interrelationship between the environment and human health, including the impact of various environmental factors on individual and community well-being.

CO-2: Identify and analyze key environmental issues and challenges that affect human health, such as air and water pollution, toxic substances, climate change, and occupational hazards.

CO-3: Apply critical thinking skills to evaluate the effectiveness of environmental policies, regulations, and interventions in promoting public health and sustainability.

CO-4: Employ appropriate research methodologies and tools to investigate environmental health issues, gather relevant data, and interpret findings to propose evidence-based solutions.

CO-5: Communicate effectively, both orally and in writing, about the complex connections between the environment and health, advocating for environmentally sustainable practices and promoting public awareness and engagement in addressing environmental health concerns.

Dr. Ajay
12/06/23

MEWAR UNIVERSITY

B.sc Medical lab technology

Project Outcomes

CO-1: Analyze and interpret medical laboratory tests

CO-2: Apply knowledge of medical laboratory techniques and procedures

CO-3: Demonstrate effective communication skills in a healthcare setting

CO-4: Evaluate and ensure quality control in medical laboratory practices

CO-5: Collaborate with healthcare professionals in the diagnosis and treatment of diseases

Internship

CO-1: Demonstrate proficiency in performing laboratory tests and procedures relevant to the field of Medical Laboratory Technology, including sample collection, processing, analysis, and interpretation.

CO-2: Apply critical thinking and problem-solving skills to analyze and interpret laboratory results, identify abnormalities or discrepancies, and make appropriate recommendations for further investigation or treatment.

CO-3: Utilize laboratory equipment, instruments, and technology effectively and safely to perform a wide range of diagnostic tests, ensuring accuracy, precision, and adherence to quality control standards.

CO-4: Communicate effectively with healthcare professionals, patients, and other members of the healthcare team to convey laboratory findings, discuss test requirements, and collaborate in the delivery of optimal patient care.

CO-5: Demonstrate professionalism, ethical behaviour, and adherence to legal and regulatory requirements in all aspects of laboratory practice, including patient confidentiality, documentation, and continuous professional development.

12/02/23.