

PARAMED VARTA

A HALF-YEARLY NEWSLETTER



MATA GUJRI COLLEGE OF ALLIED HEALTH & PARAMEDICAL SCIENCES

A Constituent Unit of Mata Gujri University, Kishanganj, Bihar, India



ISSUE 2 – DEC. 2025

MESSAGES

Messages From the Editors' Desk

Greetings from Mata Gujri College of Allied Health and Paramedical Sciences, a Constituent Unit of Mata Gujri University! It gives us immense pleasure to connect with you through the First edition of our college newsletter. At MGCOAHPS, we believe that education is not merely a means to acquire knowledge, but a path to shape character, ignite curiosity, and instil a sense of responsibility towards society. This newsletter is not just a reflection of our milestones, but also a celebration of our collective spirit — the spirit that drives us to keep moving forward with integrity, compassion, and a vision for a healthier world. Let us continue to learn, grow, and contribute with sincerity and determination. We extend my best wishes to all our students, faculty, staff, and well-wishers. May the journey ahead be filled with meaningful accomplishments and shared success.

PURABPALI ROAD, KISHANGANJ, PIN-855107 (BIHAR)

University Website: www.matagujriuniversity.com

College Website: www.mgcoahpskne.com



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About MGCOAHPS

Mata Gujri College of Allied Health & Paramedical Sciences had its inception in the year of 2021, a Constituent unit of Mata Gujri University, Kishanganj was sponsored & established by Mata Gujri Memorial Medical College & Lions Seva Kendra Hospital Trust, Kishanganj, Bihar under Bihar Private University act-20,2013, Dated 09/09/2013 vide notification No-463 Dated 20/02/2019, recognised under 2(f) of the UGC Act, 1956. Mata Gujri University is situated in the town of Kishanganj on the north-eastern part of Bihar. MGU offers world-class infrastructure, high qualified & dedicated faculties & excellent environment for academic & intellectual growth.

The university focuses on comprehensive growth of the student, working on their hearts & minds by addressing their academic, cultural, physical & social needs in an environment of continuous interaction & growth, conducive for the enrichment of mind & body. The Faculty is fully committed to impact quality education by investing all its skills and knowledge.

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SPOTLIGHT ON NCAHP

National Commission For Allied and Health Care Profession (NCAHP) is an Act to provide for regulation and maintenance of standards of education and services by Allied and Healthcare professionals, assessment of institutions, maintenance of a Central Register and State Register and creation of a system to improve access, research and development and adoption of latest scientific advancement and for matters connected therewith or incidental thereto.

The current chairperson for NCAHP is Dr. Yagna Unmesh Shukla, who has notified 10 categories under this Act.

1. Medical Laboratory and Life Sciences
2. Trauma, Burn Care and Surgical/ Anesthesia related technology
3. Physiotherapy Professional
4. Nutrition Science Professional
5. Ophthalmic Sciences Professional
6. Occupational Therapy Professional
7. Community Care, Behavioural Health Sciences and other Professionals
8. Medical Radiology, Imaging and Therapeutic Technology Professional
9. Medical Technologists and Physician Associates
10. Health Information Management and Health Informatics Professional

Adoption of a new term in place of *PARAMEDICAL*

In accordance with the National Commission for Allied and Healthcare Professions (NCAHP) Act, 2021, the term “Allied and Healthcare” will now replace “Paramedical” in all official and institutional usage. This change, recommended by the Commission, aims to ensure uniformity, standardization, and proper recognition of healthcare professionals across the country. All universities, institutions, and government bodies are directed to adopt this terminology in communications, academic programs, and official documents to align with the national framework for Allied and Healthcare professions. Our university will adopt the term “Allied and Healthcare” in place of “Paramedical” from the 2026 batch onward.

Implementation of the new curriculum

In another circular in compliance with the directives of the National Commission for Allied and Healthcare Professions (NCAHP), all universities and institutions offering Allied and Healthcare Professional courses are required to adopt the newly released NCAHP curricula from the academic year 2026–2027 onwards, with dedicated Boards of Studies to be constituted for effective implementation and academic governance.



ACHIEVEMENTS OF MGCOAH&PS
STUDENTS' ACHIEVEMENTS IN UNIVERSITY FINAL EXAMINATION
3rd YEAR B.SC. MLT EXAMINATION FEB-MAR 2024 (I)

Name of the Students	University Roll No.	Percentage	Rank
VISHAL KUMAR	MLT15	79.4	1 st
SUHANA JAHAN	MLT19	78.8	2 nd
MAHBOOB AKHTER	MLT07	76.8	3 rd

3RD YEAR B.SC. OT&A EXAMINATION FEB-MAR 2024 (I)

Name of the Students	University Roll No.	Percentage	Rank
GHAZALA NAAZ	OTA02	77.2	1 st
SHAH FAISAL	OTA13	74.8	2 nd
MD MANAWAR AKBAL	OTA05	73.2	3 rd

3RD YEAR B.SC. R&IT EXAMINATION FEB-MAR 2024 (I)

Name of the Students	University Roll No.	Percentage	Rank
DEBOSHREE BHATTACHARYA	RIT23	79.4	1 st
ZOHAIBUDDIN	RIT21	77.6	2 nd
AAFRIN NAAZ	RIT01	75.8	3 rd
ROOMANA RAHMANI	RIT16	75.8	3 rd

2ND YEAR B.SC. MLT EXAMINATION FEB-MAR 2024 (I)

Name of the Students	University Roll No.	Percentage	Rank
ANKIT KUMAR JHA	MLT27	76.8	1 st
IBTISAM JAHAN	MLT35	72.8	2 nd
SAYAN MANDAL	MLT25	69.2	3 rd

2ND YEAR B.SC. OT&A EXAMINATION FEB-MAR 2024 (I)

Name of the Students	University Roll No.	Percentage	Rank
SWETA RAJ	OTA25	81.0	1 st
AMIT KUMAR PAUL	OTA26	75.8	2 nd
RAJA SUMAN	OTA34	72.4	3 rd

2ND YEAR B.SC. R&IT EXAMINATION FEB-MAR 2024 (I)

Name of the Students	University Roll No.	Percentage	Rank
ASHUFA JAHAN	RIT32	76.2	1 st
SATI SATYAM KHUSHI	RIT38	74.8	2 nd
WAHIDA MASROOR	RIT45	71.6	3 rd

**1ST YEAR B.SC. MLT, OT&A AND R&IT EXAMINATION
FEBRUARY-MARCH 2024 (I)**

Name of the Students	University Roll No.	Percentage	Rank
SHAMS PER WAIZ	RIT69	74.6	1 st
MD ROMJAN ALI	OTA62	73.4	2 nd
SADIYA NAAZ	MLT55	72.2	3 rd
FATIMA ZOHRA	RIT72	71.0	4 th
GOURAB CHANDRA DAS	MLT58	70.8	5 th
DAMINI KUMARI	OTA56	70.8	5 th
MEHRAZ BAKSH	RIT58	70.8	5 th

PUBLICATIONS BY THE FACULTY MEMBERS

Sl. No.	Title	Author(s) Name	Journal Name	Year	Type of Publication
1	Anemia: A Comprehensive Review of Types, Causes, And Clinical Management	Mr. Arijit Naskar	World Journal of Pharmacy and Pharmaceutical Sciences	2025	Review Article
2	Sources of Laboratory Error and Quality Control Systems: A Comprehensive Review of Laboratory Best Practices	Mr. Arijit Naskar	International Journal of Science & Engineering Development Research (IJS DR)	2025	Review Article
3	Automated Analysis of White Blood Cells: Technological Advances and Diagnostic Accuracy	Mr. Shiva Das	International Journal of Innovative Research in Technology (IJIRT)	2025	Review Article
4	Advances in Molecular Diagnostic Techniques and Laboratory Automation: Principles, Technologies, and Clinical Applications	Mr. Shiva Das	International Journal of Science & Engineering Development Research (IJS DR)	2025	Review Article
5	The Role of Pharmacogenomics in Personalized Therapeutics: A Crossroad Between Pharmaceutical and Biomedical Sciences	Mr. Shiva Das	American Journal of Pharmtech Research	2025	Review Article
6	Biochemical and Molecular Approaches to Bacterial Pathogen Identification: Traditional Techniques and Emerging Advances	Mr. Subhajit Karmakar	International Journal of Medical Laboratory Research (IJMLR)	2025	Review Article
7	An Overview of ELISA and Automatic Analyzers: History, Principles, Components, Types, and Laboratory Applications	Mr. Subhajit Karmakar	International Journal of Science & Engineering Development Research (IJS DR)	2025	Review Article

BOOK CHAPTER(S) PUBLISHED BY THE FACULTY

Sl. No.	Title	Author(s) Name	Publication Year	Type
1	Contact Lens Care and Compliance	Ms. Anamika Anand	2025	Book Chapter

PUBLICATIONS BY THE STUDENTS

Sl. No	Title	Author(s) Name	Journal Name	Year	Type of Publication
1	Anemia: A Comprehensive Review of Types, Causes, And Clinical Management	Mr. Amit Kumar Das Ms. Zaria Hasan Md. Dilkash Alam	World Journal of Pharmacy and Pharmaceutical Sciences	2025	Review Article
2	Sources of Laboratory Error and Quality Control Systems: A Comprehensive Review of Laboratory Best Practices	Mr. Ramesh Kumar Ms. Nidhi Kumari Mr. Aashish Kumar Singh	International Journal of Science & Engineering Development Research (IJSER)	2025	Review Article
3	Automated Analysis of White Blood Cells: Technological Advances and Diagnostic Accuracy	Md. Salman Rahi Mr. Raja Kumar Mr. Adil Anwer	International Journal of Innovative Research in Technology (IJIRT)	2025	Review Article
4	Advances in Molecular Diagnostic Techniques and Laboratory Automation: Principles, Technologies, and Clinical Applications	Mr. Bhushan Kumar Singh Mr. Vishal Kumar Mr. Manish Kumar Thakur	International Journal of Science & Engineering Development Research (IJSER)	2025	Review Article
5	Biochemical and Molecular Approaches to Bacterial Pathogen Identification: Traditional Techniques and Emerging Advances	Mr. Athar Rehan Ms. Rukshar Jahan Ms. Mahenoor	International Journal of Medical Laboratory Research (IJMLR)	2025	Review Article
6	An Overview of ELISA and Automatic Analyzers: History, Principles, Components, Types, and Laboratory Applications	Ms. Suhana Jahan Mr. Mahboob Akhter Ms. Ladli Perween	International Journal of Science & Engineering Development Research (IJSER)	2025	Review Article

Faculty Speaks

Biofilm-Mediated Atherogenesis: The Role of Oral *Streptococci* in Coronary Plaque Instability

About 19.8 million people died from heart disease in 2022, with roughly 85% due to stroke and heart attack. When clots, coronary artery spasms, or plaque accumulation (atherosclerosis) impede blood flow to the heart, a heart attack (myocardial infarction) occurs. Past research has linked bloodstream bacterial infections to higher cardiovascular risk and plaque accumulation. A new study, led by Pekka J. Karhunen (published in the Journal of the American Heart Association), analyzed coronary plaques from 121 people who died suddenly and 96 endarterectomy patients and found Viridans group *Streptococci*—common oral bacteria—were the most frequent microbes in those plaques.

Researchers are looking into biofilm calcification and potential vaccines against biofilm-related thrombosis. The authors suggest that these bacteria may live in a biofilm on teeth and occasionally release bacteria that infiltrate plaques, cause inflammation, rupture plaques, and encourage thrombus formation. Independent cardiologists called the findings intriguing and consistent with the role of inflammation in atherosclerosis, but urged caution because the study captures plaques after events, limiting causal timelines. While there is presently no vaccine to prevent *Strep. Viridans*, clinicians advise timely treatment of infections, maintaining excellent oral hygiene, and remaining up to date on influenza, COVID-19, and pneumococcal vaccinations to prevent severe infections.

Source: Medical News Today

Date of Publication: Sept 13th, 2025

Collected by – Subhajit Karmakar

Lecturer

SWASTH NARI SASHAKT PARIVAR ABHIYAAN

- The Swasth Nari Sashakt Parivar Abhiyan (SNSPA) campaign was inaugurated on 17th Sept 2025 by **Prime Minister Narendra Modi**, on his 75th birthday.
- The Swasth Nari Sashakt Parivar Abhiyaan (SNSPA) is a landmark initiative by the Ministry of Health and Family Welfare (MoHFW) and the Ministry of Women and Child Development (MoWCD),
- The Swasth Nari Sashakt Parivar Abhiyan will deploy more than one lakh health camps across Ayushman Arogya Mandirs and Community Health Centres across the country.
- The Abhiyan intends to ensure comprehensive screenings for women's health issues like **anaemia, hypertension, diabetes, and cancer**.
- One of the key objectives of the Abhiyan is to support **immunisation** efforts and **nutritional benefits** to **reduce maternal and child mortality rates**.
- The Abhiyan aims to operate on real-time monitoring via the **SASHAKT** portal to ensure transparency and efficiency.
- The **Swasth Nari Sashakt Parivar Abhiyan** has a community support system as one of its pivotal components, with **Nikshay Mitras** being critical to the implementation of the scheme across the country



Source: - Government of India Press Information Bureau.

Collected By : Vivek Jha

Asst. Prof.

SUSHRUTENA SIDDHAM

Sushruta, revered as the Father of Surgery, was an ancient Indian physician around 600 BCE. His remarkable contributions are preserved in the Sushruta Samhita, one of the earliest and most comprehensive texts on surgical science. The work not only explained diseases and treatments but also systematized surgical knowledge, making it a cornerstone of ancient medicine.

Among his achievements, Sushruta is most remembered for pioneering plastic surgery, particularly rhinoplasty using forehead skin flaps—a method still guiding modern reconstructive surgery. He also described cataract removal, wound suturing, fracture management, dislocation treatment, and caesarean sections, reflecting his broad surgical expertise.

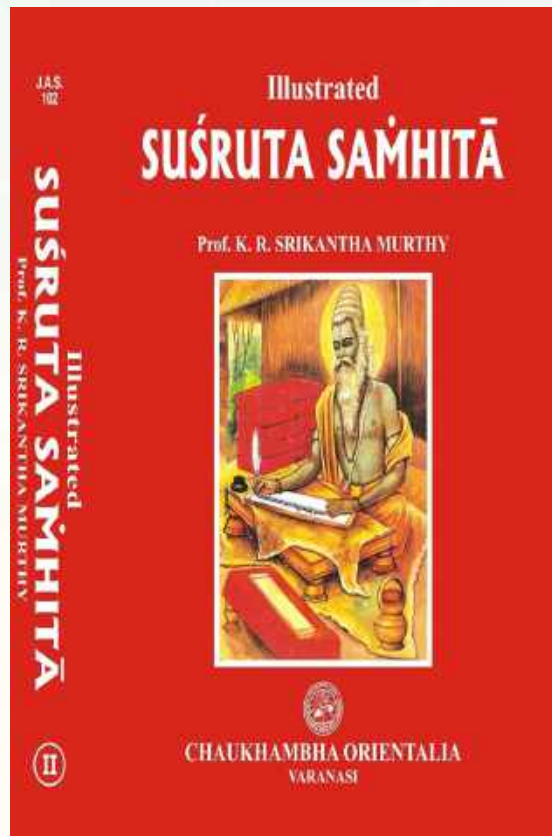
Beyond operations, he emphasised anatomy through cadaver dissection, listed over 300 procedures and 120 instruments, and stressed hygiene, preparation, and aftercare. Blending science, precision, and compassion, Sushruta's teachings spread worldwide through translations, leaving a legacy that defines surgery as both an art and a science rooted in humanity.

A line from Sushruta Samhita says,

“वाग्मी दाक्ष्यसमायुक्तो दृष्टकर्मा शुचिर्भिषक्।

शास्त्रज्ञो नित्ययुक्तश्च शल्यकृत्सिद्धिमृच्छति॥”

meaning, the surgeon who is eloquent, skilful, experienced, pure, well-versed in science, and ever attentive attains success in surgery.

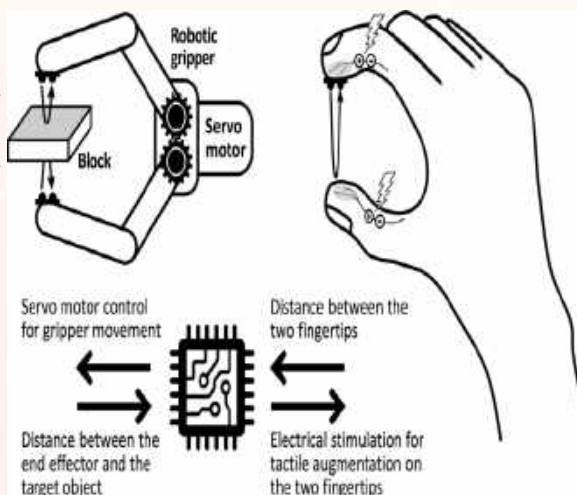


Collected By:
Mr. Atindra Paul
Lecturer

Distance Turns Surgical Proximity

The last few years have witnessed exponential growth in Operation Theatre (OT) technology in India, with modular OT systems emerging as a new norm. Hospitals like Breach Candy in Mumbai have commissioned advanced modular operation theatres in association with international companies. These units specialize in rigorous infection control, lean workflow, and high-end materials, ensuring sterility and patient safety. Such an infrastructure lessens surgical complications and sets standards for contemporary healthcare delivery. A milestone breakthrough has been the introduction of robotic and telesurgery systems. India's first indigenous surgical robot, SSI Mantra 3, was used to conduct remote cardiac surgeries, where doctors from Gurugram

performed operations on patients in Jaipur, at almost 300 km. This shows how robotic surgery can cross distances and provide specialized care to underserved areas. The accuracy, lesser recovery time, and increased safety make robotic systems an integral part of future surgical practice. Just as revolutionary are IoT-powered devices and simulation labs. From smart surgeon panels and LED OT lights to medical gas monitoring systems, IoT integration enhances real-time safety checks and data logging. In conjunction with this, state-of-the-art OT simulation labs in institutions such as Nagpur's Government Dental College offer realistic training environments for surgeons. These innovations collectively make Indian OTs safer, smarter, and more patient focused.



Collected By:
Mr. Dibyendu Manna
Lecturer

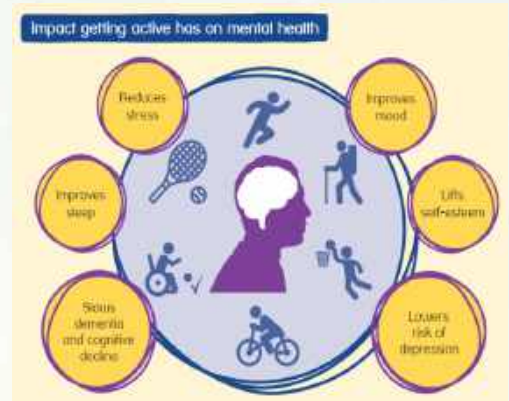
Common Myth (preclinical Misconception) Evidence-based Truth (The Nuance)

1. All muscle atrophy is reversible. Truth: While some is, severe or chronic atrophy can lead to irreversible fibrous connective tissue replacement.
2. The Hering-Breuer reflex limits all deep breaths. Truth: It is weak in adults and mainly a protective mechanism in infants; ventilation is typically regulated by pCO_2 levels.
3. Cardiac output is directly proportional to heart rate. Truth: Excessive tachycardia reduces filling time, decreasing stroke volume and ultimately lowering cardiac output.
4. The liver's functions are entirely separate from its blood supply. Truth: The liver receives a dual blood supply (portal vein and hepatic artery); both are essential for its metabolic and detoxification roles.
5. All neurons follow the all-or-none principle equally. Truth: While the action potential is all-or-none, the graded potentials that trigger them are variable and summative.
6. The Circle of Willis always provides perfect collateral cerebral circulation. Truth: Anatomical variations are common (up to 50% of people), and the circle is often incomplete or inefficient in providing full collateral flow.
7. All arteries carry oxygenated blood; all veins carry deoxygenated blood. Truth: This is based on systemic circulation; the pulmonary artery carries deoxygenated blood, and the pulmonary vein carries oxygenated blood.
8. The blood-brain barrier is impermeable to all large molecules. Truth: It is a selective barrier that can be bypassed by certain lipophilic molecules or compromised by inflammation/disease (e.g., meningitis).
9. DNA replication is perfectly accurate. Truth: DNA polymerase has proofreading abilities, but mutations still occur at a low, non-zero frequency, driving evolution and disease.
10. The vagus nerve is purely parasympathetic. Truth: Most vagus nerve fibres are afferent (sensory), relaying information from the viscera to the brain.
11. All skeletal muscle fibres are the same. Truth: There are different fibre types (Type I, IIa, IIb) that vary in their myoglobin, fatigue resistance, and primary ATP source (e.g., oxidative vs. glycolytic).
12. The kidney primarily regulates water volume. Truth: The kidney's most critical job is regulating solute concentration and acid-base balance; water regulation follows solute gradients.
13. The spleen is solely a lymphatic organ. Truth: It has a dual role—lymphatic (white pulp) and hematopoietic/blood filtering (red pulp) roles, especially in removing old red blood cells.
14. Myelin is only found on motor neurons. Truth: Myelin sheaths are found on both motor and sensory axons in the peripheral nervous system (PNS) and central nervous system (CNS).
15. The gallbladder produces bile. Truth: The liver produces bile; the gallbladder only stores, concentrates, and releases it.
16. The Baroreflex maintains blood pressure perfectly. Truth: It is a short-term regulator (e.g., standing up); long-term BP regulation is dominated by renal fluid and electrolyte balance.
17. All digestion occurs in the stomach. Truth: Protein digestion begins in the stomach, but most digestion and absorption of nutrients occur in the small intestine.
18. The hypothalamus is only about hormones. Truth: It is the central control hub for the Autonomic Nervous System, linking neural input to hormonal output.
19. The tunica media is the thickest layer in all blood vessels. Truth: In veins, the tunica adventitia (externa) is often the thickest layer; the media is thickest in muscular arteries.
20. Ischemia always causes immediate cell death. Truth: Ischemia causes injury; the duration and severity determine if it leads to reversible injury or irreversible infarction/necrosis.

STUDENTS COLUMN

THE ROLE OF REGULAR EXERCISE IN IMPROVING MENTAL HEALTH

Recent studies show that regular physical activity is not only good for the body but also for the mind. Exercise helps in reducing stress, anxiety, and depression by releasing “Happy Hormones” called Endorphins. Just 30 minutes of walking, yoga, or cycling daily can improve mood, boost memory, and increase overall energy. Maintaining an active lifestyle is now considered as effective as medicine for many mild mental health problems. Doctors recommend combining exercise with a balanced diet and good sleep to achieve the best results. Exercise is a natural therapy for both body and mind and should be a part of everyone's daily routine.



Shifa Taiyaba
B.Sc. R&IT 2023 Batch

THE TRANSFORMATIVE POWER OF TELEHEALTH: EXPANDING ACCESS, ENHANCING CLINICAL SERVICES, AND CONNECTING HEALTHCARE SYSTEMS

Telemedicine is often used interchangeably with telehealth, but it can also refer more specifically to remote clinical services like diagnosis and monitoring. In situations where access to care is limited - whether due to rural locations, transportation issues, mobility challenges, or public health crises like outbreaks and pandemics - telehealth can really make a difference. It not only helps keep patients engaged in their treatment but also facilitates distance learning, meetings, supervision, and presentations among healthcare professionals. Plus, it supports online information sharing, health data management, and the integration of healthcare systems. For instance, telehealth might involve two doctors discussing a case over a video call, a robotic surgery performed remotely, or physical therapy conducted through digital monitoring tools. It can also include sending test results between facilities for a specialist's review, continuous home monitoring of patient health data, online consultations between clients and practitioners, or even video interpretation during a medical appointment.



Suhana Jahan
B.Sc. MLT 2021 Batch

IMPACT OF JUNK FOOD ON THE HEALTH OF INDIAN YOUTH

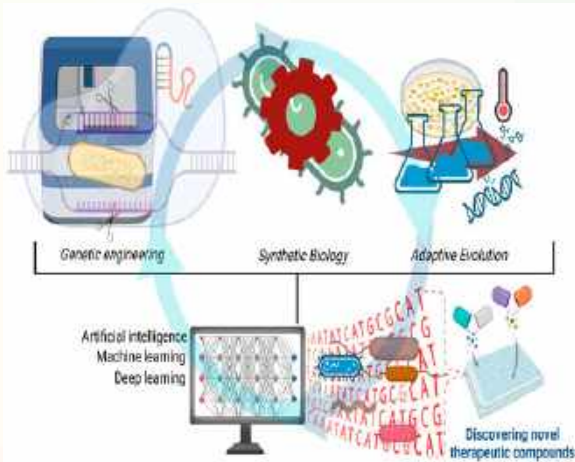
Recent surveys in India show a rapid increase in junk food consumption, especially among school and college students. Easy availability of fast food and soft drinks has led to rising cases of obesity, diabetes, and heart problems at a young age. Doctors report that one in five urban teenagers is overweight due to high intake of fried snacks and sugary drinks. Lack of physical activity further worsens the situation.

There is an urgent need to promote healthy eating habits, traditional Indian diets (like fruits, pulses, and home-cooked meals), and regular exercise to protect the health of the young generation.



Md Kaif
B.Sc. R&IT 2023 Batch

ENGINEERED BACTERIA ARE REVOLUTIONIZING MICROBIOLOGY AND MEDICINE



Recent advancements in microbiology highlight the development of "Engineered Bacteria" for applications in cancer treatment, rapid diagnostics, and antibiotic innovation. These genetically modified microbes, created through synthetic biology, possess the ability to perform specialized tasks in varying fields such as medicine, agriculture, and industry. In the medical realm, engineered bacteria are being utilized as "living medicines" capable of navigating the human body to detect disease markers and deliver targeted therapies. For instance, some engineered strains can locate cancerous tumours and release anti-cancer agents or produce therapeutic proteins for inflammatory conditions and even help restore gut

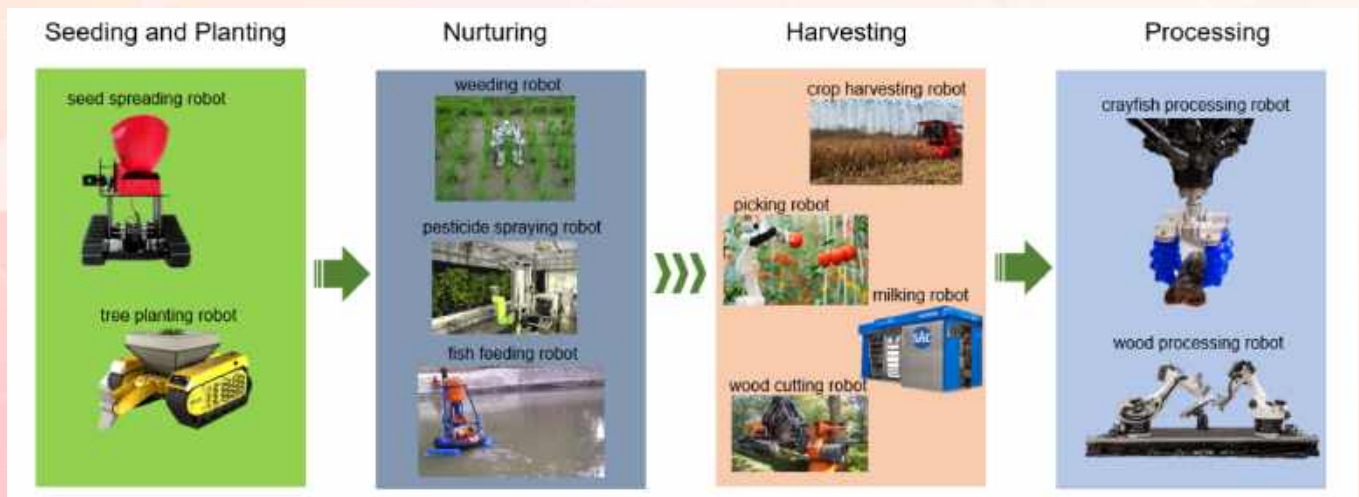
microbiome balance. Beyond healthcare, these bacteria have industrial and agricultural potential, enabling sustainable manufacturing processes that produce biofuels, biodegradable plastics, and pharmaceutical ingredients. However, challenges remain in ensuring their safety and efficacy, managing interactions with the host's microbiota, and establishing effective delivery mechanisms, including the use of containment systems like "kill switches" to prevent unregulated spread. Notable strains include *Lactobacillus reuteri*, *Escherichia coli*, and *Bacillus subtilis*.

Zaria Hasan

B.Sc. MLT 2021 Batch

ROBOTICS AND AUTOMATION IN AGRICULTURE: PRESENT AND FUTURE APPLICATIONS.

The agricultural sector is undergoing a technological revolution, increasingly adopting robotics and automation to address challenges posed by a growing global population and a declining rural workforce. This movement, known as "Agri-Tech" or "Smart Farming," focuses on enhancing efficiency, increasing yields, and ensuring sustainability. Robotics and automation are primarily utilized to carry out repetitive, labour-intensive tasks with high precision, aiming to support rather than replace human farmers by allowing them to concentrate on strategic management. Current applications include Autonomous Tractors, Drones, Automated Harvesting, and Weeding Robots, which collectively boost productivity. In the future, the integration will evolve toward a collaborative ecosystem involving Swarm Robotics - small autonomous units and Hyper-Personalised Plant Care, driven by AI-based decision-making. While robotics and automation promise reduced labour costs, improved crop quality, and enhanced sustainability, they also present several challenges: high initial costs, technical complexity, data management and integration issues, and the need for ongoing research and development.



Vishal Kumar

B.Sc. MLT 2021 Batch

MEMORIES OF MY COLLEGE JOURNEY – MATA GUJRI COLLEGE OF ALLIED HEALTH AND PARAMEDICAL SCIENCE

As I write these words, my heart feels heavy yet full. I, Prerna, being a final year student, this moment is both a farewell and a celebration, a mixture of smiles, tears, and countless memories. From the very first day, when I stepped into college with excitement and uncertainty, to today, standing on the edge of my next chapter, My College gave me enormous things like an opportunity to rise in every aspect of my life, and helped me to achieve a shining future ahead. It gave me lots of exposure, by blessing me by having our own hospital, because of this, I got exposure to lots of patients in my day-to-day life, by having very good Professors who not only helped me with my education but also helped me in my day-to-day struggle of life. They helped me like a mentor, guided me like a parent and cherished me like a friend. In my college, every year we have a Sports meet, where I have the chance to play a variety of games. Additionally, we have an annual meet, which allows me to showcase my talents through dance, singing, acting, or other skills. I got chances to participate and upskill my talent in poster presentation, drawing Competition and many more. Every day, just like Teacher's Day and Student's Day, is celebrated to encourage our faculty members as well as students. College is a second home to me in where I got teachers as my parents, juniors as my small brothers and sisters and my very special batchmates as a family. We laughed, we cried, we fought, and we celebrated together – but through it all, we grew together. We celebrate each festival like our family. “I entered as a stranger and leave as a family – and though this is the end of college life, it is the beginning of lifelong memories.”

Prerna Sah

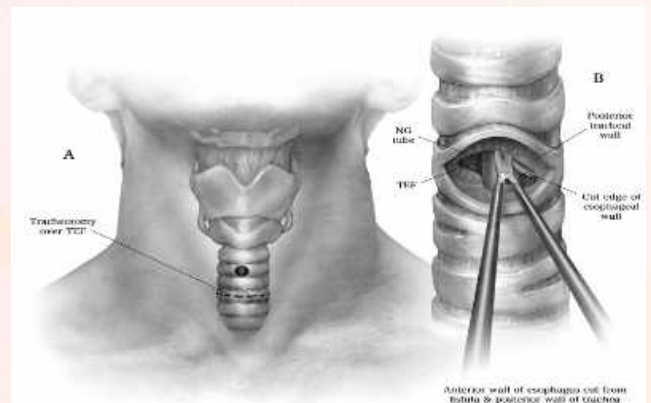
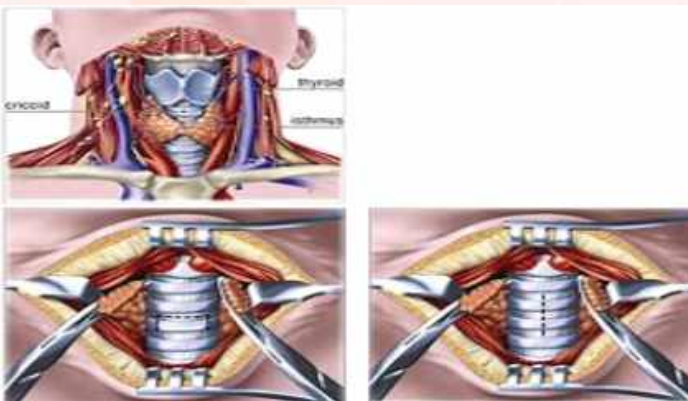
B.Sc. R&IT 2021 Batch

TOMOSYNTHESIS: BRIDGING THE GAP BETWEEN 2D RADIOGRAPHY AND CT IMAGING

Radiographic imaging has long been central to diagnostic medicine, but traditional 2D radiographs are limited by the superimposition of anatomical structures, often obscuring pathology. Tomosynthesis, or digital tomosynthesis (DTS), offers a compelling alternative. By acquiring multiple low-dose X-ray projections at different angles and reconstructing them into sectional images, tomosynthesis provides quasi-3D visualization with enhanced diagnostic clarity. Technically, tomosynthesis involves an X-ray tube moving in an arc over the patient while capturing a series of projections. These are reconstructed using algorithms such as filtered back projection or iterative reconstruction. Unlike CT, which requires a full 360-degree rotation and multiple detectors, tomosynthesis employs a limited angle and a stationary detector—making it more cost-effective and significantly reducing radiation exposure. Clinically, tomosynthesis has had its greatest impact in breast imaging. Digital Breast Tomosynthesis (DBT) enhances lesion detection and lowers recall rates, particularly beneficial for women with dense breast tissue. In chest imaging, tomosynthesis improves detection of lung nodules and tuberculosis over traditional radiography, while maintaining a lower radiation dose than CT. In conclusion, tomosynthesis is a transformative imaging modality that effectively addresses the shortcomings of 2D radiography while avoiding the higher dose and cost of CT. With ongoing advances in artificial intelligence and image reconstruction, tomosynthesis is poised to become a standard tool in modern diagnostic radiology.

Deboshree Bhattacharya

B.Sc. R&IT 2021 Batch



THE RISE OF ANTIBIOTIC RESISTANCE: A MAJOR THREAT THAN CANCER?



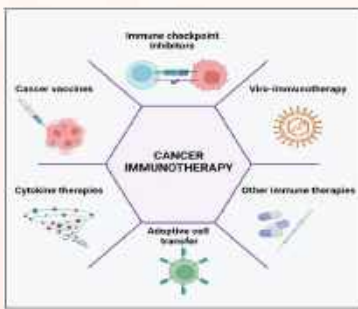
Antibiotics can kill bacteria; however, frequent use allows bacteria to adapt and develop resistance, rendering antibiotics ineffective. This issue is particularly significant in India, where antibiotics can be accessed freely and taken without proper dosage or duration guidelines. The phenomenon of SUPERBUGS, or multidrug-resistant organisms (MDRs), emerges from the misuse of antibiotics, making infections difficult to treat. Resistance can be transmitted between individuals, leading to increasingly problematic infections that do not respond to treatment. The threat posed by antibiotic resistance is considered greater than that of cancer, as it has the potential to spread widely within communities, undermining the foundations of modern medicine. If antibiotics

lose efficacy, even minor issues such as cuts or sore throats could become life-threatening, reversing medical progress and increasing mortality rates for commonly treatable infections. Routine medical procedures and surgeries would become risky, with the possibility of returning to a scenario reminiscent of the "pre-antibiotic era," where infections posed significant dangers to mortality. The escalating fear surrounding antibiotic resistance underscores its critical importance as a public health concern. That's why the WHO calls antibiotic resistance a "Global Health Emergency".

Madiha Afreen

B.Sc. R&IT 2024 Batch

REWRITING LIFE: INNOVATIONS IN MOLECULAR DIAGNOSTICS AND IMMUNOTHERAPY



"The future of healing within us – coded in DNA, guarded by our own immunity."

Modern medicine is evolving rapidly, & laboratory technologies are at its core. Two groundbreaking innovations – **Gene Editing using CRISPR technology and Cancer Immunotherapy** – are changing how diseases are detected and treated.

CRISPR, often called the "genetic scissors," allows scientists to cut and modify specific parts of DNA. With this tool, errors in the genetic code that cause disorders like sickle cell anaemia or cystic fibrosis can be corrected. What once seemed impossible – editing the script of life – is now becoming reality, offering hope for patients with inherited diseases.

Equally transformative is Cancer Immunotherapy: This technique harnesses the patient's own immune system. Modified T-cells target and destroy cancer cells effectively, reducing dependence on chemotherapy but with fewer side effects and greater survival chances. These innovations symbolize a shift in healthcare – from merely treating symptoms to preventing and correcting disease at the molecular level. It is about rewriting destiny and giving patients a second chance at life. **"When we heal at the root of life itself, we do not just treat disease – we transform destiny."**

Rashmi Bharti

B.Sc. MLT 2024 Batch

BIG DATA AND ANALYTICS TO SUPPORT DISEASE PREVENTION:

The digital revolution has significantly transformed healthcare, particularly through the application of Big Data and analytics. Hospitals and clinics generate extensive medical data that, when anonymized and analyzed, unveil patterns and trends beneficial for disease prevention. Utilizing AI and machine learning, these analyses can link health outcomes to demographics, environments, and lifestyles, assisting in chronic disease prediction and public health planning, as seen during COVID-19. Smaller data sets, such as those from Electronic Health Records (EHRs), can also provide valuable insights for detecting risks and monitoring patient progress. The benefits include enhanced healthcare planning, early disease detection, and personalized treatment; however, challenges related to data privacy, security, and system integration persist. Ultimately, Big Data is shifting healthcare towards a more preventive and patient-centred approach.



Athar Hussain

B.Sc. OT&A 2024 Batch

ROLE OF LABS DURING PANDEMIC

Laboratories played a crucial role during the pandemic by providing rapid and accurate diagnosis of infections. They provided the foundation for testing, allowing for early patient identification, isolation, and treatment, all of which contributed to the breaking the transmission chain. Large-scale surveillance, mutation monitoring, and public health decision-making were all aided by labs. Research labs made contributions by creating novel diagnostic kits, therapeutic medications, and vaccines. Additionally, they used standardized protocols to guarantee the quality and dependability of the results. All things considered, laboratories served as the first line of defence, assisting governments and medical professionals in managing the situation and safeguarding communities everywhere.



Athar Rehan
B.Sc. MLT 2021 Batch

THE IMPORTANCE OF CRITICAL THINKING AND SOFT SKILLS IN MEDICAL LABORATORY TECHNOLOGY

In the field of medical laboratory technology, professionals are required not only to have strong technical knowledge and laboratory skills but also to demonstrate critical thinking and essential soft skills. These attributes are integral to ensuring accurate results, fostering transparent communication, and providing excellent patient care.

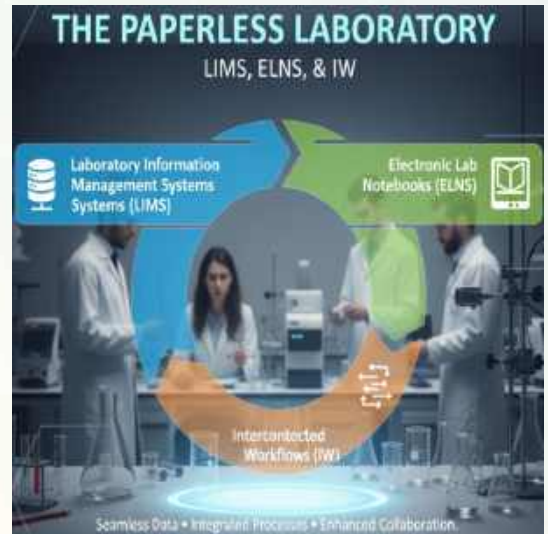


Critical thinking plays a vital role in laboratory settings where technologists deal with complex data, advanced equipment, and diverse biological samples. They must be adept at evaluating potential causes of unexpected test results, validating the tests' accuracy, and making well-informed decisions based on their analyses. This necessitates the application of logical reasoning, problem-solving capabilities, and analytical skills. A lack of critical thinking can jeopardize the reliability of laboratory results, which directly impacts patient diagnoses. In summary, the synthesis of technical expertise with critical thinking and soft skills is essential for professionals in the medical laboratory technology field, as it underpins the quality of diagnostics and patient care.

Mahboob Akhter
B.Sc. MLT 2021 Batch

THE PAPERLESS LABORATORY'S

Modern laboratories are moving away from paper-based systems. Instead of relying on handwritten notes and physical records, laboratory technologists now use tools like Laboratory Information Management Systems (LIMS), Electronic Lab Notebooks (ELNs), and Interconnected Workflows (IW). These technologies provide real-time access, automate data collection, and improve teamwork. Going paperless has advantages like improved accuracy, smoother compliance with regulations, faster decision-making, and reduced costs. It also minimizes paper usage and storage needs, which supports sustainability. With advanced security features and cloud-based platforms, laboratories get flexibility, scalability, and even predictive for future research. Ultimately, the shift to digital labs not only improves efficiency and data reliability but also ensures that laboratories remain competitive and environmentally responsible in today's digital world.



Amit Kumar Das
B.Sc. MLT 2021 Batch

HEALTH INSURANCE

Health insurance is a Contract where you pay the Premium regularly to an insurance Company and in return, they cover some or all of your medical expenses due to Sickness, injury, Pregnancy, etc.

Importance of Health Insurance:-

1. Financial Protection

Medical Procedures Can be very costly, and insurance prevents you from spending all your savings

2. Covers unexpected Emergencies

Accidents, sudden illnesses or motor disease can happen at any time. Insurance ensures you get timely treatment.

3. Peace of mind

knowing you are financially protected in case of health Problems, reduces stress and worry

4. Access to Better Healthcare

With insurance, you can choose better hospitals, better doctors and treatments, without thinking about the immediate Cost.

Health insurance is not just about money -It's about Security, timely care and peace of mind for you and your loved ones.



Radhika Paswan
B.Sc. OT&A 2024 Batch

Events update

INTERNATIONAL PARAMEDICS DAY, 2025

Mata Gujri College of Allied Health and Paramedical Sciences, Kishanganj, successfully organized an event on 8th of July 2025, to celebrate International Paramedics Day on the theme “Unity and Community.” The event was led by the Dean Academics and the Principal with excellent coordination of the entire paramedical faculty team. Their joint efforts ensured a smooth and enriching experience. The event highlighted this year's theme, emphasising the invaluable contribution of paramedics in emergency response and patient care. Faculties organised awareness talks, and students participated in poster presentations, a drawing competition, a quiz competition, cultural events, and other interactive sessions showcasing advancements in medical technology and emergency management. The celebration not only recognized the tireless efforts of paramedics but also inspired students to uphold the values of service, empathy, and professionalism in their healthcare journey.



TEACHER'S DAY CELEBRATION

Mata Gujri College of Allied Health and Paramedical Sciences Celebrated Teachers' Day on 5th of September with great enthusiasm. The whole program was organised by the students of the institute. The event started with lighting of the lamp and followed by garlanding on the photograph of Sarvepalli Radhakrishnan to pay him homage. Principal highlighted the importance of Teachers' Day. Some students also expressed their gratitude towards the teachers by giving short speeches. Students performed cultural activities like dance, songs, poems, dramas, etc. on this special occasion.

11th INTERNATIONAL YOGA DAY 2025

The 11th International Yoga Day 2025 was celebrated with great enthusiasm at Mata Gujri College of Allied Health and Paramedical Sciences on 21st of June 2025. This year's theme was Yoga for One Earth, One Health. An early morning yoga session was held in the university campus, and a famous Yoga guru was invited to aware the members and students of the university about Yoga. Everyone actively participated in various yoga sessions under his guidance. The event not only encouraged healthy lifestyle practices among participants but also emphasised the role of yoga in reducing stress and enhancing concentration, aligning with the global theme of holistic health and harmony.



Events update

NATIONAL NUTRITION WEEK

As part of the celebration of National Nutrition Week of India 2025, observed from 1st to 5th September 2025, the Department of Community Medicine and the Department of Biochemistry of Mata Gujri Memorial Medical College & LSK Hospital, Kishanganj, jointly organized creative competitions for undergraduate students of Mata Gujri University, Kishanganj. The events included a Poster Competition and a Reel Competition based on the theme “Food, Toxins and the Fight for Health.” The poster competition invited hand-drawn entries showcasing originality and creativity, while the reel competition encouraged students to produce short, original videos of up to one minute in Hindi or English. Both events aimed to promote awareness about nutrition and health, inspiring students to express their understanding of food and toxins through art and media.



ANTI-RAGGING WEEK



Anti-Ragging Week was observed at Mata Gujri College of Allied Health and Paramedical Sciences from 12th to 18th August 2025 with great enthusiasm and active participation from students and faculty. The week-long program aimed to spread awareness about the harmful effects of ragging and promote a safe, inclusive and supportive campus environment. Various activities were organised, including an interactive session where students openly discussed the importance of mutual respect and the consequences of ragging. A poster-making competition on the theme YOUTH AGAINST RAGGING, encouraging students to showcase their creativity and strong messages against this social menace. A logo design competition on the theme RAGGING FREE CAMPUS provided a platform for students to express their vision of a safe academic atmosphere. These initiatives inspired students to contribute towards building a respectful and harmonious college culture.

79th INDEPENDENCE DAY

On the 15th of August, Mata Gujri College of Allied Health and Paramedical Sciences celebrates India's 79th Independence Day, where students, faculties, and staff members pay tribute to the Nation and the freedom fighters of India. It was a remarkable day. We honour and respect all our freedom fighters who fought for India's freedom. Students who topped the last academic session were invited to hoist the flag on Independence Day. The stage was occupied with the Registrar, the Vice-Chancellor, the Dean Academics and the Principal of Mata Gujri College of Allied Health and Paramedical Sciences, the Dean Academics and the Principal of other colleges in the university, along with the trustee members to sing the national anthem. The celebration of Independence Day ended with the distribution of sweets among the students.



Events update

FAREWELL-HAYAH SHALOM, 2025

The Mata Gujri College of Allied Health and Paramedical Sciences organised a grand farewell ceremony titled HAYAH SHALOM on 7th July 2025 to bid adieu to the outgoing batch of students 2021-2025. The event was marked by a blend of emotions, nostalgia and heartfelt memories shared among students, faculty and staff. The program commenced with a warm welcome address by the faculty members, highlighting the achievements and contributions of the graduating students during their academic journey. The event was filled with vibrant cultural performances, including dances, songs and skits presented by the juniors, which created an atmosphere of joy and celebration.



ଫାଉଁସ୍ ପାତ୍ର



ଅନନ୍ତର ଚଳନ ଅନନ୍ତର
ମଧ୍ୟରେ ଶାନ୍ତ ଲକ୍ଷ୍ମିନୀ



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ଅନନ୍ତର ଅନନ୍ତର ଥାପ
ରାଜ୍ୟର ମାତା ଉନ୍ନତୀବୀ



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ଉଜ୍ଜ୍ୱଳ କାଶ୍ୟ ଦୀର୍ଘକାଳ
କର୍ମ ହୁଅନ୍ତି ଦୁର୍ଲ୍ଲଭ ନକ୍ଷ



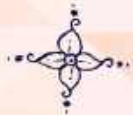
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ହେଉଥାଉ କୁଜାଳ ବିଷ
ଆର୍ଦ୍ରହୃଦ୍ରେ ହୁଅନ୍ତି ଅକ୍ଷ



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କୃତ୍ତିମ ଅଧ୍ୟାପି ଧରଣୀମୟ
ସ୍ୱପ୍ନା ଚଳନ୍ତି ଅଗ୍ରଣୀରଥ



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ଅକ୍ଷମା ଶାନ୍ତ କାଶ୍ୟ ଶାନ୍ତ
ହୃଦ୍ରେ ଶାନ୍ତି ଶାନ୍ତ



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CELEBRATING MILESTONES: TWO STUDENTS BEGIN THEIR NEW JOURNEYS THROUGH MARRIAGE

The College extends its heartfelt congratulations and best wishes to Ms. Ladli Perween [Batch: 2021, MLT] and Ms. Samsun Nihar [Batch: 2022, MLT] on the joyous occasion of their wedding. May this new journey of life be filled with happiness, mutual respect and enduring companionship. The entire college fraternity wishes them a lifetime of love, prosperity, and togetherness.

STUDENT ACHIEVEMENT: LITERARY ENDEAVOR

We are delighted to share that Miss FATIMA ZOHRA, a student of 2023 batch, has authored and published a compilation of her poems titled *SISKIYAAN of my lost heart*. The book is available for purchase online. We congratulate her on this remarkable literary achievement and wish her continued success in her creative journey.

Acknowledgement:

On behalf of Mata Gujri College of Allied Health and Paramedical Sciences, we would like to express our deepest gratitude to all the advisors and well-wisher who have provided guidance, support, or encouragement throughout the shaping of the 1st issue of “Paramed Varta”. Special thanks to all the authors and contributors for their valuable contributions for framing this newsletter. The newsletter will be published half yearly (online) and available on the college website. We welcome all the readers to put forward your valuable feedback that will encourage us to provide a better version in the next issue of “Paramed Varta”.

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Medical College

Courses Offered:

MBBS
POST GRADUATION
IN
ANATOMY
PHYSIOLOGY
BIOCHEMISTRY
PHARMACOLOGY
MICROBIOLOGY
COMMUNITY
MEDICINE
PATHOLOGY
GENERAL MEDICINE
DERMATOLOGY
(DVL)
PAEDIATRICS
GENERAL SURGERY
ORTHOPAEDICS
E.N.T.
ANAESTHESIOLOGY
OBST. & GYNAE.
OPHTHALMOLOGY
RADIO-DIAGNOSIS



Nursing College

Courses Offered:

G.N.M NURSING
BACHELORS OF
SCIENCE IN
NURSING
(B.Sc.Nursing)
POST BASIC
BACHELORS OF
SCIENCE IN
NURSING
(Post Basic B.Sc.
Nursing)
MASTER OF
SCIENCE IN
NURSING (M.Sc.
Nursing)
1. Medical Surgical
Nursing
2. Obstetric and
Gynecological Nursing
3. Child Health
Nursing
4. Mental Health
Nursing
5. Community Health
Nursing



Pharmacy College

Courses Offered:

DIPLOMA IN
PHARMACY
BACHELOR OF
PHARMACY
BACHELOR OF
PHARMACY
(LATERAL ENTRY)
MASTER OF
PHARMACY
(PHARMACEUTICS)
MASTER OF
PHARMACY
(PHARMACOLOGY)
MASTER OF
PHARMACY
(PHARM ANALYSIS)



Allied Health & Paramedical College

Courses Offered:

BACHELOR OF
SCIENCE IN
MEDICAL
LABORATORY
TECHNOLOGY
BACHELOR OF
SCIENCE IN RADIO-
DIAGNOSIS &
IMAGING
TECHNOLOGY
BACHELOR OF
SCIENCE IN
OPERATION
THEATRE &
ANAESTHESIA
TECHNOLOGY
BACHELOR OF
SCIENCE IN
OPTOMETRY &
OPHTHALMIC
TECHNOLOGY