



ABOUT JAMIA MILLIA ISLAMIA (JMI)

JAMIA MILLIA ISLAMIA is one of the prominent Central Universities in India. It has created a niche of its own in the academic world and is known for its quality teaching and cutting edge research. It has been accredited with "A++" "Grade by UGC NAAC and it has bagged 1st Rank among all the central universities in the country in the Ministry of Education ranking with a score of 90% and JMI was also featured in the top ten list of National Institutional Ranking Framework (NIRF) 2021 released by HRD Minister earlier this year.

Jamia Millia Islamia was founded at Aligarh in 1920 during the Khilafat and Non-Cooperation movement in Gandhiji's response to boycott government call tosupported educational institutions. The institution continues to reflect the original concern of its founders of encouraging the indigenous roots of education. True to the ideal of the founders, it has over the years tried to integrate the physical and mental development of its students. Jamia was made a central university by an act of Indian parliament in 1988.

Jamia seeks to foster a national cosmopolitan perspective in its academic programs as well as in co-curricular activities. The objective of the university is to disseminate advanced knowledge and provide instructional and research extension facilities in various branches of learning.

Today, Jamia Millia Islamia, with more than 17000 students, 800 full time faculty teachers, 9 faculties, 39 departments, 30 centers and over 200 courses, is one of the most prominent, promising and culturally diversified Central Universities in the country. The university has a thriving intellectual community of students and staff and is committed to the trans-formative power of education and research. It tries to foster a national cosmopolitan perspective in its academic programs as well as in extra curricular activities, encouraging students to think as global citizens.





GradeA++Score:3.61 NAAC2021,Cycle2



QSAsiaUniversity Ranking2022



QSAsiaUniversity Ranking2021



JMIRanked6thamongallU niversities in India(MHRD-NIRF2021)



JMI Ranked 13th in overallCategories in India(MHRD-NIRF2021)



JMI Ranked 7th inIndia



JMIRankedin601-800bracket amongUniversitiesoftheWorld (TIMESHIGHEREDUCATION2022)



JMIRankedin751-800bracket amongUniversitiesoftheWorld (QSWORLDRANKING2022)



JMIRankedin751-800bracket amongUniversitiesoftheWorld (QSWORLDRANKING2021)

CAMPUSAMENITIES

CENTRAL LIBRARY

ThestudentsofMTechhavefull-fledged access to one of the best managed libraries in the city,the Central Library of Jamia, stocking a rich collection of over 3.28 lakh books and bound volumes of periodicals, about 2500 manuscripts, 200 microfilms, and subscriptions to 440 journals in all major disciplines, the University Central Library caters to the academic needs of the University students,staff& research scholars.

The library has fully computerized its most actively used collection, which is now available to users through OPAC (Online Public Access Catalogue) with network access across the campus-wide LAN.



ENGINEERING LIBRARY

The Engineering Library fosters intellectual growth and advances the mission of Engineering by supporting excellence and innovation in education and research, managing and delivering information, and partnering to develop and disseminate new areas of engineering studies. The Engineering library is equipped with a diverse collection of books and business journals to keep the students updated and well informed with the latest developments and changes in the corporate world.

COMPUTING FACILITIES

The students of Engineering have access to state-of-the art computing facilities supported by an array of peripherals such as high-speed internet connectivity, laser printers, copiers and scanners. The computers are equipped with various management information system software to provide better clarity and comprehensive training of management concepts to the students.





SEMINAR HALL

The institute has a well-equipped, fully air-conditioned seminar hall with complete audio visual facilities for conferences, guest lectures, meetings and corporate interactions. It has been the venue for numerous industrial interactions, brain storming sessions and insightful learning experiences.

CAMPUSAMENITIES

M.A. ANSARI AUDITORIUM

The Ansari Auditorium is Jamia's one-stop destination for all cultural activities. With aseatingcapacityofmorethan500,theAnsariAuditoriumhasplayedhosttoamyriadoflecture sbyeminentspeakers,annual fests,theatrical performances and film festivals.





CAFETERIA FACILITIES

With several cafeterias in the campus, students have multiple hangout spots to choose from. The cafeterias provide hygienic food at reasonable rates. They are popular hangout spots for the students and serve as a platform for interaction among students from different disciplines.

SPORTS AND HEALTH FACILITIES

Jamia Millia Islamia has long been known for promoting sports and games among the student youth. The Jamia Sports Complex is the center for all sports activities of the University. Jamia offers world class sports facilities and equipment for sports including badminton, cricket, football, hockey, basketball, table-tennis, boxing, handball, athletics, shooting, etc. Jamia offers special concessions and relaxation in admissions to outstanding sportspeople. The University boasts of the Bhopal Cricket Ground that has been the center stage for events like the Women's Cricket World Cup and has produced stalwarts like Bishen Singh Bedi and Virender Sehwag.





HOSTEL FACILITIES

The University has a number of fully furnished hostels for both men and women. There are seven hostels for men and six for women. The hostels provide facilities such as 24-hourinternetfacility, library, common room, recreation room, playground, RO purifiers, dining hall, 24-hourpower-backup, telephone facilities, etc.

Students from diverse cultures and ethnic backgrounds live together, thus creating a strong base of values and integrity among the students.

<u>CONTENTS</u>

Vice Chancellor's Message	01
H.O.D's Message	02
Coordinator's Message	03
Placement Desk's Message	04
Department of Applied Sciences & Humanities	05
Faculty Members	06
About Course Structure	08
Career and Scope	09
Course Curriculum	10
Student's Profile	12
Past Recruiters	13
Why Hire Us?	15
Recruitment Form	16
Contact Us	17

VICECHANCELLOR'SMESSAGE



Dear Recruiters,

It gives me immense pleasure to invite you to the placement process of the M.Tech (Computational Mathematics) offered by the Department of Applied Sciences & Humanities, Faculty of Engineering &Technology, Jamia Millia Islamia.

Jamia Millia Islamia made a modest beginning in 1920 at Aligarh, with the resolute determination of its founding members--Shaikhul Hind Maulana Mahmud Hasan, Maulana Muhammad Ali Jauhar, Jenab Hakim Ajmal Khan, Dr. Mukhtar Ahmad Ansari, Jenab Abdul Majeed Khwaja, and Dr. Zakir Hussain to create an institution that would manifestindigenousethosandspiritofplurality. Itwasconceived as anation al institution that would offer progressive education and nationalist ideals to students from all communities, particularly the Muslims. The emergence of Jamia was supported by Gandhiji and Tagore who felt that Jamia could shape the lives of hundreds and thousands of students on the basis of a shared culture and worldview. Jamia's development is marked by sacrifices made by the staff and students and a host of individuals who contributed through myriadefforts.

Jamia Millia Islamia has become an ensemble of a multilayerededucational system which covers all aspects of schooling, undergraduate, post-graduate, M.Phil/ Ph.D and post-doctoral education.Withofacultiesoflearning,38teachingandresearchdepartment sandover 27 centres of learning and research, we attract the brightest youngminds from all over the country. They use creative space of Jamia toactualizetheirpotential.

I am confident that our students will bring great laurels to yourorganisation as they are conscientious and sound professionals in the domain of Science and Technology and enthusiastically recommend them for your consideration.



ProfessorNajmaAkhtar, Hon'bleViceChancellor



H.O.D'SMESSAGE



DearRecruiters,

I, as a Head of Department of Applied Sciences & Humanities, take this opportunity to invite all leading business organizations and companies to visit our campus to recruit/select students for final placements. It is my firm belief that our students of M. Tech. will bring great laurels to your esteemed organization.

Qualitative higher and technical education holds an edge in transforming human beings into human capital and human resource. Institutions of higher learning such Central University Jamia Millia Islamia is committed to the task of reducing/ bridging this gap.

In this endeavor, Department of Applied Sciences & Humanities of Jamia Millia Islamia has enriched its programs through complete overhauling of course structure, syllabus updated with contemporary requirements of the universities, institutions and industry. We have a strong placement team with experienced senior professor heading, to guide the talented and enthusiast youth by providing direction in order to attain right placements which smooth-ens life's journey for self and future generations.

We would like to thank all the corporate who have in the recent past encouraged and responded to our Campus Recruitment Programs. We look forward to building a long term, mutually beneficial relationship with your esteemed organization.

I wish the outgoing batch of M. Tech. the very best in all their future endeavors, and hope they achieve success in their careers and lives.

Professor Zishan Husain Khan, Head,

Department of Applied Sciences & Humanities



COORDINATOR'S MESSAGE



Dear Recruiters,

I am very proud to take this opportunity to welcome you for the placement of our students, who would be completing their M. Tech. In 2025. It is strongly believed that theoretical knowledge must be backed by practical exposure of young minds to working situations.

The era of globalization, coupled with the advent of Soft Computing and impetus of Internet, has brought up sea changes in the corporate governance and thinking process of human mind, especially in this current millennium. I am pleased to note that the Department of Applied Sciences & Humanities under the Faculty of Engineering & Technology is producing quality professionals in the field of Soft Computing. In addition to a 2 year post graduate program, M. Tech. (Computational Mathematics), the department is successfully running an M.Tech. (Energy Science) through a well-designed Fundamental industry-oriented curriculum.

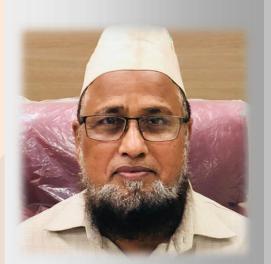
I am sure that dedication and commitment of the students through their studies in these courses would contribute to national development by placing themselves in the industries and educational institutions. I am confident that students will also be marked out by international agencies. The mission of producing able and competent talented professionals in the department is being achieved due to the involvement of highly dedicated and experienced faculty members. I hope they will continue to produce worthy professionals to fulfill the industrial and educational need.

With this objective I certainly would like to invite all esteemed and relevant organizations and companies to conscript our students as competent and professionals that would eventually enable them to stand out in industry/organization/institutions and on global scale at large.



Professor Musheer Ahmad,

Course Coordinator



PLACEMENT DESK'S MESSAGE



DearRecruiters,

Due to recent technological development, the requirements of industries are becoming more dynamic by the day. Students having knowledge of core subjects with skills in computer programming and Applied Mathematics are in great demand by the industries.



Department of Applied Sciences & Humanities is one of the oldest Department of Jamia Millia Islamia. It has highly qualified and skilled faculties and well-equipped computing facilities. It is a matter of pride that the Department of Applied Sciences & Humanities has been producing quality professionals in the field of Computation, Data Science and Artificial Intelligence. The students get rigorous exposure to Computer programming and its applications in Automation and Data Analysis.

It is our constant endeavor to provide knowledge based technological services to satisfy the needs of society and industry and thus help in building our national potentiality in technology and research for the development of the country.

Our placement office is well equipped with the facilities that are required for the smooth conduct of recruitment activities and I am sure that our students will find it useful in ensuring the placement of their choice. I congratulate the placement office for their efforts and wish all the students the best of luck in their chosen career path.

I, personally, take pleasure in inviting industries to take the opportunity of availing the best of the brains for individual as well corporate and, thereby, being a part of national development.

Prof. Rahela Farooqi,

Hony. Director, University Placement Cell

DEPARTMENT OF APPLIED SCIENCES & HUMANITIES

Established in 1996, as one of the departments of the Faculty of Engineering and Technology, this department participates in B. Tech and M. Tech programs offered by the faculty. In addition, the department offers a two-year M. Sc. Electronic program. There are 13 well-qualified and experienced faculty members whose services are available to the department. Faculty members of the department have published numerous research papers, research articles and books with reputed international publishers. The Department has been actively involved in research and development based on different domains of Applied Sciences and Humanities. The faculty members of the department has successfully completed many research projects in various fields of science and technology funded by different funding agencies. Several research projects are going on in the department and expected to deliver significant impact. The department has well equipped teaching and research laboratories for hands-on training of the students. The department isalsoinvolvedintrainingandplacementofitsstudents in coordination with the Training and Placement Office of the university.

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<u>FACULTYMEMBERS</u>

Dr. Musheer Ahmad

Professor & Coordinator

Ph.D.,MPhil.,MSc

Area of

Specialization: Cryptography,

Information and network security, Applications
Of Group Theory, Applied
Mathematics, Fuzzy Algebra
and its Applications.

Dr. Quddus Khan

Professor

Ph.D.

Area of Specialization:

Differential Geometry and manifolds

Dr.MohammadAmjad

Professor

Ph.D.,MTech

Area of

Specialization: Wireless

Sensor Networks and IoT, Mobile Computing, SecurityinMobile Communication, Mobile Ad hocNetworks.

Dr. Sarfaraz Masood

Assistant Professor

Ph.D., M.Tech.

Area of Specializations:

Applied Intelligence, ArtificialNeuralNetworks,Net work Weight initialization of

Sigmoidal feed forward neural networks, Deep Learning,
Application of DLinthefield of

image processing and biomedical signal processing, Evolutionary Optimization techniques.

FACULTYMEMBERS

Dr. Ahmad Kamal

Assistant Professor Ph.D., M.C.A

Area of Specialization:

Data Mining,
SentimentAnalysis&Opinio
nMining,
NaturalLanguageProcessing,



andMachineLearning.

Assistant Professor Ph.D., M.Tech.

Area of Specialization:

Chaos-based, Cryptography,
Multidisciplinary Cryptography,
Crypt analysis, Hash Function
and Authentication,
Information Hiding, Metaheuristics for Security
Applications, Machine
Learning for Security
Applications

Dr. Shahzad Alam

Assistant Professor Ph.D.,MTech

Area of Specialization:

Image processing, information Security, Cryptography and Soft Computing Techniques.

Dr. Iftekhar

Guest Lecturer Ph.D.,M. Sc.(Tech)

Area of Specialization:

Applied Mathematics,
Applications of Group Theory,
Fuzzy Algebra and Its
Applications.

Dr. Mansaf Alam

Expert Lect. & Guidance Ph.D.,M.C.A

Area of Specialization:

Application Programming, Database Management Systems, Multimedia Applications & Computer Architecture & Design



Prof. M. N. Hoda

Expert Lect. & Guidance

Ph.D.,M.C.A

Area of Specialization:

Computer Science, Information Technology, Application Programming



ABOUT COURSE STRUCTURE

A Master of Technology (MTech) in Computational Mathematics can open up various career opportunities in both academia and industry. Here are some potential scopes for individuals with an M.Tech. in Computational Mathematics:

Data Science and Analytics: With the increasing demand for data-driven decision-making, computational mathematics graduates can work in the field of Data Science and Analytics. They can use their mathematical and computational skills to analyze and interpret large datasets, making valuable contributions to Industries such as Finance, Healthcare and Technology.

Financial Modeling: Computational mathematics skills are highly valued in the Finance industry. Graduates can work on developing mathematical models for financial analysis, risk assessment and algorithmic trading. They may find opportunities in investment banks, hedge funds, and financial

consulting firms.



Research and Development (R&D): Graduates can contribute to research in various fields such as applied mathematics, computer science, engineering, finance, data security and more. They may work on developing new algorithms, computational models, or solving complex mathematical problems.

Artificial Intelligence (AI) and Machine Learning (ML): Computational mathematics plays a crucial role in AI and ML algorithms. Graduates can contribute to developing advanced algorithms, optimizing models, and working on applications in areas like pattern recognition, image processing, natural language processing and recommendation systems.

Academia: Many individuals with an M. Tech, in Computational Mathematics choose to pursue a career in academia. They may become teachers, researchers, or educators in universities and research organizations, contributing to the academic community through teaching and publishing research papers.



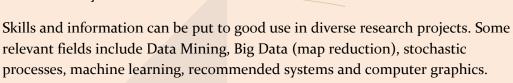
CAREER AND SCOPE

The objectives of an M. Tech. program in Computational Mathematics are to provide students with a profound understanding of advanced mathematical theory and computational techniques, emphasizing their direct correlation with cutting-edge technologies such as deep learning, artificial intelligence(AI), neural networks, and machine learning (ML) and Data Analytics. The curriculum aims to equip students with the skills necessary to apply mathematical models to complex problems, fostering interdisciplinary connections with fields like computer science and engineering. Graduates are expected to demonstrate proficiency in utilizing mathematical concepts to develop and optimize algorithms, particularly those underpinning deep learning and neural network architectures in the realm of ML. The outcomes of the program include not only advanced mathematical competence but also a strong foundation in computational skills, enabling graduates to contribute to the rapidly evolving landscape of AI and ML technologies. Through research contributions and interdisciplinary applications, graduates are poised to leverage their M.Tech. in Computational Mathematics to make significant advancements in fields where the intersection of mathematical modeling and machine learning is pivotal. M. Tech. program in computational mathematics is designed to meet the needs of sophisticated users, especially in the context of scientific investigations and technological innovation. Computational mathematics combines mathematics with computer science to produce useful techniques. The syllabus would cover relevant areas which are in demand.





The M. Tech. program is designed to meet present and future needs of relevant mathematics in industry and research. The three components viz mathematics, computing and financial engineering need to be blended as integrated components to ensure relevance their mutual links are emphasized in the curriculum. Along with technical aspects of computing, the scope for development is pointed out. The program would be managed by a team of committed faculty members. They would impart skills and guide students in innovative ways.





FIRST YEAR					
FIRST SEMESTER		SECOND SEMESTER			
Subjects	Credits	Subjects	Credits		
Computational Methods for Differential Equa	tions 4	Seminar	4		
Discrete Mathematics with Applications	4	Scientific Computing (Numerical Techniques) 4		
Computer Programming(Python)	4	Data Warehouse and Data Mining	4		
DatabaseManagementSystem (DBMS)	4	Big Data Analytics	4		
NeuralNetworks&OptimizationTechniques	4	Machine Learning	4		
Lab-I (ComputerProgrammingLab usingPython)	2	Big Data Analytics Lab (Lab-III)	2		
LabII(ORACLE/MySQLLab)	2	Machine Learning Lab (Lab-IV)	2		

Total Credits: 24 Total Credits: 24

	SECONDYEAR				
4	THIRDSEMESTE	R		FOURTH SEMESTER	
	Subjects	Credits	Subject		Credits
	Minor Project MOOC Courses	8	Major Project		12
	m . 1	O 11.			

Total Credits: 16 Total Credits: 12

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STUDENT SPROFILE











<u>PASTRECRUITERS</u>





































































zomato

































Computational mathematics combines mathematics with computer science to produce useful techniques. The syllabus would cover relevant areas which are in demand. The program is comprehensive and would(for instance)meet the needs of ISRO, DRDO, DOS, BARC, research bodies and industry. Graduates would participate in research & development as well as computational activities.

The comprehensive M. Tech in Computational Mathematics Program seeks to develop intellectual discipline, critical and analytical thinking, with the view to grooming passionate individuals capable of taking up responsibility. Under the guidance of expert faculty members, the rigorous curriculum in Computation has equipped the students with tools and techniques of Data Science and Artificial Intelligence. They are at their best when it comes to the understanding of Mathematics and Computer Science concepts and are capable ofdelivering exceptional performances for the mutual betterment of the organizations, they become a part of , and for themselves, as well.

The knowledge of key Data Science and AI concepts and their application to the current market scenario helps students in Data analysis and recommendations. For instance, papers like Statistics, MachinelearningandBigDatahavemadethestudentsbetteratunderstandingthetheoryunderlyingDataScienceas well as familiar with real life functioning of the Digital markets. Moreover, the curricula place a lot of importance on intensive application-based research and analysis. To strengthen the skill set, the students are also trained to handle and implement data packages and software like Python, C++, SQL and Hadoop. Apart from this, the students have gained a holistic understanding in various work domains by applying their knowledge in a major project which is a part of curriculum.



RECRUITMENTFORM

Name of the organisation:								
Contact Person:		Desig	nation:					
Phone Number:		Email	ID:					
BRIEF DESCRIPTION	ON OF JO)B						
ENA	SCRIPTION/ GNATION	OFFERS/ VACANCIES	SALARY OFFERED		LOCATION			
PRE PLACEMENT	PRE PLACEMENT TALKS (PPT) DETAILS							
Will you be delivering PP		•						
PLACEMENT PROCESS								
ROUNDS	WILLING TO CONDUCT (YES/NO)		DESIRE	D DATE				
Preliminary/Written test								
Group Discussion								
Personal Interview								
Any Other (Please specify)								
Any other information:								

CONTACTUS



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