



MIT Arts, Commerce  
& Science College

**MIT** | Arts, Commerce  
& Science College

An Autonomous College Affiliated to Savitribai Phule Pune University  
Accredited by NAAC with "A" Grade

## M.Sc. Industrial Mathematics with Computer Applications

A.Y. 2026-27



MIT Arts, Commerce and Science College established by Prof. (Dr.) Vishwanath Karad in 2007 under the aegis of Maharashtra Academy of Engineering and Educational Research (MAEER) Pune, affiliated with Savitribai Phule Pune University and recognised by the Government of Maharashtra has emerged as a prominent institute emphasizing on quality education, research opportunities and exposure to advancing academic innovation and engaging students, staff, alumni, and other stakeholders to achieve its educational goals. Located in a peaceful and nurturing environment, the college is Equipped with top- notch infrastructure with latest technological advancements and excellent library facilities for seamless academic activities. Research and academic programmes are driven by our highly qualified and experienced faculty members who foster in-depth knowledge and practical skills through active learning, field visits, expert guidance, training programs, research support, and continuous assessment. We have the Training and Placement Cell who facilitates the process of campus placement, strives to help students in improving communication and employment- seeking skills and assist to explore the various job opportunities thus leading to best placements amongst educational institute in Pune.

### Awards, Affiliations and Recognition:

- MIT ACSC College is Accredited by NAAC with a CGPA of 3.21 on a Four point scale at 'A' Grade.
- Affiliated to Savitribai Phule Pune University and recognised by the Government of Maharashtra.
- Our educational institution in Pune, Maharashtra, has received the Education Excellence Award for achieving outstanding placements amongst other regional institutions.
- We are proud to have received the Best College Award in Rural Area for two consecutive years (2015-16 & 2016-17) from Savitribai Phule Pune University. We recognise our commitment to providing quality education in underserved areas.
- Our efforts towards student development have been acknowledged with the University Level Best College Award for 2017-18 by Savitribai Phule Pune University, underscoring our dedication to nurturing well-rounded individuals.
- We are ranked among the top colleges in India by India Today MDRA Best Colleges Ranking for 2018, 2019, 2020, and 2022, attesting to our reputation for excellence in education.
- MITACSC has secured the 3rd position in the prestigious TOP 10 EMERGING COLLEGES 2022, recognizing colleges established in or after 2010 for outstanding performance. The college is proud of its accomplishments and advancements and is committed to owning its promising future.

### ----- Undergraduate Programs -----

- |                                                        |                                     |
|--------------------------------------------------------|-------------------------------------|
| ❖ B.Com. ( Bachelor of Commerce)                       | ❖ B.Sc. ( Animation )               |
| ❖ BBA ( Bachelor of Business Administration)           | ❖ B.Sc. ( Computer Science )        |
| ❖ BBA ( International Business)                        | ❖ B.Sc. ( Cyber & Digital Science ) |
| ❖ BCA ( Science )                                      | ❖ B.Sc. ( Information Technology )  |
| ❖ B.Sc. ( Artificial Intelligence & Machine Learning ) | ❖ B.Sc. ( Data Science )            |

### ----- Postgraduate Programs -----

- |                                     |                                                               |
|-------------------------------------|---------------------------------------------------------------|
| ❖ M.Sc. (Computer Science)          | ❖ M.Sc. (Computer Application)                                |
| ❖ M.Sc. (Data Science)              | ❖ M.Sc. ( Information Technology )                            |
| ❖ M.Sc. ( Cyber & Digital Science ) | ❖ M.Sc. (Industrial Mathematics with<br>Computer Application) |

### ----- Ph.D. -----

- ❖ Ph.D. - Mathematics

# M.Sc. IMCA

## ----- About the Course -----

M.Sc. (Industrial Mathematics with Computer Applications) is the two years, fulltime program designed as per National Education Policy 2020 by considering the rapid changes in science and technology and new approaches in different areas of Mathematics and related subjects. The changing scenarios of higher education in India and abroad are taken into account to orient curricula towards the application of Mathematics and Computer Science in Research and Industry. The curriculum includes the subjects related to Industrial Mathematics, Core Computer Subjects as well as the Emerging Technologies in Computer Science. Theoretical courses help lay the foundation for developing logical thinking, while practical courses provide practical experience related to industrial requirements.

## ----- Why Choose MIT ACSC for M.Sc. IMCA ? -----

The course structure offered by MIT ACSC incorporates subjects related to the most advanced and latest developments in software and information technology. The curriculum includes in-demand courses such as python programming, android programming, and Django. Hence, it helps students upgrade their knowledge and understanding of the discipline. The institute has a history of producing outstanding software professionals who have found a place in top companies. The college collaborates with several companies that offer internships and campus placements to start their careers. The institute offers various skill development courses that help improve their skills and enhance their competence. These courses boost their confidence to face the real world through interactive sessions and hands-on training in several technical and personal skills.

## ----- Scope of M.Sc (IMCA) -----

- It provides students with the skills and knowledge they need to solve complex industrial problems using mathematical and computational tools.
- Adequate exposure to global and local concerns so as to explore many aspects of Mathematical Sciences.
- It develops relational understanding of mathematical concepts and structures with mathematical reasoning.
- It provides a platform for the application of mathematical skills and knowledge for societal issues.
- It develops the ability to write necessary algorithms & programs in different languages as per the need of the industry.
- It prepares students for research and development in industrial and engineering fields that use mathematical and computational methods.





## Eligibility

- ◆ Student from any graduation (with Mathematics up to second year) securing a minimum 50% of marks (45% for reserved category student as per the Maharashtra State Government Rules).

### ----- How to Apply ? -----

An eligible candidate has to apply directly to the college through the college admission application form. Visit the college website <https://apply.mitacsc.ac.in> to apply online.



----- Program Structure -----

M.Sc. (IMCA)   SEMESTER I										
Subject Code	Course Type	Course Name	Teaching Scheme Hrs/Week		Examination Scheme and Marks			Credits		
			TH	P	CCE	EE	Total	TH	P	Total
P24/IMCA1MCT1	Core	Linear Algebra	03	-	20	30	50	2	-	2
P24/IMCA1MCP1		Lab on Linear Algebra using Python Programming	-	04	20	30	50	-	2	2
P24/IMCA1MCT2		Discrete Mathematics	05	-	40	60	100	4	-	4
P24/IMCA1MCT3		Object Oriented Programming using C++	03	-	20	30	50	2	-	2
P24/IMCA1MCT4		Relational Database Management System	03	-	20	30	50	2	-	2
P24/IMCA1MCP2		Lab on Object Oriented Programming using C++ and Relational Database Management System	-	04				-	2	2
P24/IMCA1MET1A	Elective	Numerical Analysis	03	-	20	30	50	2	-	2
P24/IMCA1MEP1A		Lab on Numerical Analysis using Python	-	04	20	30	50	-	2	2
OR		OR								
P24/IMCA1MET1B		Software Engineering & Testing	05	4	40	60	100	04	-	4
P24/IMCA1RMT	RM	Research Methodology	03	-	20	30	50	02	-	2
P24/IMCA1RMP		Lab on Research Methodology	-	04	100	-	-	-	02	2

M.Sc. (IMCA)   SEMESTER II										
Subject Code	Course Type	Course Name	Teaching Scheme Hrs/Week		Examination Scheme and Marks			Credits		
			TH	P	CCE	EE	Total	TH	P	Total
P24/IMCA2MCT1	Core	Applied Algebra	03	-	20	30	50	2	-	2
P24/IMCA2MCT2		Foundation of Analysis	03	-	20	30	50	2	-	2
P24/IMCA2MCP1		Lab on Foundation of Analysis using Sage Math	-	04	20	30	50	-	2	2
P24/IMCA2MCT3		Data Structure using C++	05	-	40	60	100	4	-	4
P24/IMCA2MCT4		Python for Data Science	03	-	20	30	50	2	-	2
P24/IMCA2MCP2		Lab on Data Structure using C++ and Python for Data Science	-	04	20	30	50	-	2	2
P24/IMCA2MET1A	Elective	Statistical Methods	03	-	20	30	50	2	-	2
P24/IMCA2MEP1A		Lab on Statistical Methods	-	04	20	30	50	-	2	2
OR		OR								
P24/IMCA2MET1B		Advanced Database Technology	03	-	20	30	50	2	-	2
P24/IMCA2MEP1B		Lab on Advanced Database Technology	-	04	20	30	50	-	2	2
P24/IMCA2OJTP	OJT/FP	On Job Training or Field Project	-	02	40	60	100	-	4	4

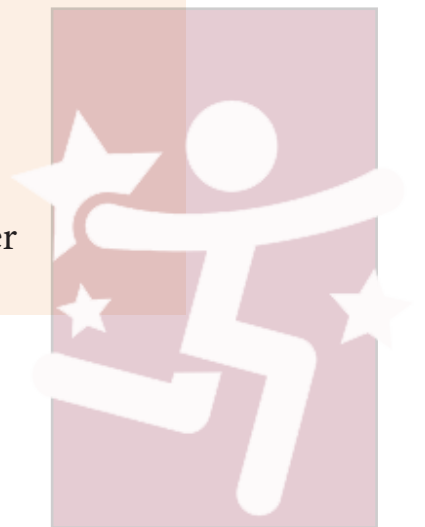
----- Program Structure -----

M.Sc. (IMCA)   SEMESTER III										
Subject Code	Course Type	Course Name	Teaching Scheme Hrs/Week		Examination Scheme and Marks			Credits		
			TH	P	CCE	EE	Total	TH	P	Total
P24/IMCA3MCT1	Core	Computational Geometry	02	-	20	30	50	2	-	2
P24/IMCA3MCT2		Lab Course on Computational Geometry	-	04	20	30	50	-	2	2
P24/IMCA3MCP1		Ordinary Differential Equations	02	-	20	30	50	2	-	2
P24/IMCA3MCT3		Design and Analysis of Algorithms	04	-	40	60	100	4	-	4
P24/IMCA3MCT4		JAVA Programming	02	-	20	30	50	2	-	2
P24/IMCA3MCP2		Lab Course on JAVA Programming	-	04	20	30	50	-	2	2
P24/IMCA3MET1A	Elective	Web Technology	02	-	20	30	50	2	-	2
P24/IMCA3MEP1A		Lab Course on Web Technology	-	04	20	30	50	-	2	2
OR		OR								
P24/IMCA3MET1B		Data Mining and Data Warehousing	02	-	20	30	50	2	-	2
P24/IMCA3MEP1B		Lab on Data Mining and Data Warehousing	-	04	20	30	50	-	2	2
P24/IMCA3RPP	RP	Research Project	-	02	40	60	100	-	4	4

M.Sc. (IMCA)   SEMESTER IV										
Subject Code	Course Type	Course Name	Teaching Scheme Hrs/Week		Examination Scheme and Marks			Credits		
			TH	P	CCE	EE	Total	TH	P	Total
P24/IMCA4MCT1	Core	Optimization Techniques	2	-	40	60	100	2	-	2
P24/IMCA4MCT2		Lab Course on Optimization Techniques	-	4	20	30	50	-	2	2
P24/IMCA4MCP1		Cloud Computing	2	-	40	60	100	2	-	2
P24/IMCA4MCT3		Machine Learning & Deep Learning Fundamentals	4	-	40	60	100	4	-	4
P24/IMCA4MCP2		Lab Course on Machine Learning & Deep Learning Fundamentals	-	4	20	30	50	2	-	2
P24/IMCA4MET1A	Elective	Advanced Web Technology	2	-	40	60	100	2	-	2
P24/IMCA4MEP1A		Lab Course on Advanced Web Technology	-	4	20	30	50	-	2	2
OR		OR								
P24/IMCA4MET1B		Big Data Analytics	02	-	40	60	100	2	-	2
P24/IMCA4MEP1B		Lab Course on Big Data Analytics	-	4	20	30	50	-	2	2
P24/IMCA4RPP	RP	Research Project	-	2	60	90	150	-	6	6

# Departmental Activities

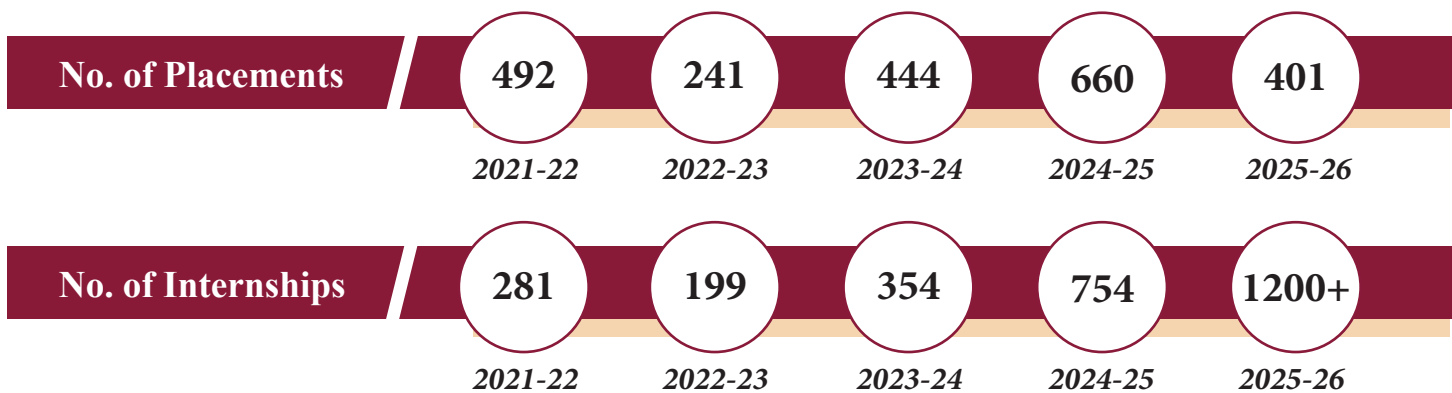
- Scifari-Flagship Event
- Vocational skill development sessions
- Expert Guidance Sessions
- Study Visits
- Add on courses
- Student centric evaluation system
- Student mentoring
- Workshops, Seminars, Guest interviews, Special shoot
- Awareness of Human Rights
- Professional Consultation Programs
- Connect with Parents
- Celebration of Special days
- College Level News Bulletin
- Club activities and competitions
- Research publication by students along with teacher



# Training & Placement



- ✓ 100 % Assistance for Placements & Internships
- ✓ Campus Recruitment Training - Soft Skills & Aptitude
- ✓ Corporate Outreach Activities
- ✓ Industry Expert Talks
- ✓ Dedicated Software Implimentation for Internships & Placements



# MIT ACSC CAMPUS



Class Room



Digital Library



Indoor Sports



Library



Library



Class Room



Computer Lab



Canteen



Cultural Room



Class Room



Electronic Lab



AV Studio



Canteen



Outdoor Sports



Garden Area

*A centre of enlightenment, freedom of thought, and academic excellence.*



Connect with Us !

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