



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

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

## **B.Sc. Data Science**

**ACADEMIC YEAR 2026-27**



*Excellence in Education*

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

# B.Sc. Data Science

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

Welcome to the B.Sc.(Data Science) programme! This programme is designed to empower students with knowledge and skills required to thrive in an era of data science and technology. By choosing B.Sc.(Data Science) Programme, students enter in to the dynamic field of data science and data analytics. Students will engage and build strong foundations in mathematics, statistics, computer science and ethical data practices. This programme not only equips students with technical expertise but also fosters a mindset of continuous learning, adaptability and ethical leadership. Welcome to the world where data becomes insight and insight drives innovation.

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## ----- Why to preferred B.Sc. DS at MIT ACSC -----

- Students are provided with opportunities to develop and hone core competency in the field of computer science and encourage them to make a mark in the much sought after IT industry.
  - Learn Machine Learning, Soft Computing, Cloud Computing, Big Data Analytics, Mobile Technologies, and Web Framework (NodeJS, ExpressJS).
  - Mandatory 6 months Industrial training & IT project in the curriculum.
  - Opportunities to work as a Software Developer, System Integrator, Data Scientist and System Analyst.
  - Opportunities to get higher education in – M.tech, M.Phil & Ph.D.
  - 100% Placement Assistance.
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## ----- Career Prospects after B.Sc. DS. -----

- To produce outstanding IT professionals who can apply the theoretical knowledge into practice in the real world and develop standalone live projects themselves
- To provide opportunity for the study of modern methods of data processing and its applications.
- To develop among students the programming techniques and the problem- solving skills through programming.
- To prepare students who wish to go on to further studies in Data Science and related subjects.







## Eligibility

- Higher Secondary School Certificate (10+2) Science Stream with Mathematics or its equivalent examination.

**OR**

- Three Years Diploma Course after S.S.C. (10th standard) of the Board of Technical Education conducted by the Government of Maharashtra or its equivalent.

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

An eligible student has to apply through the college application form for the entrance examination conducted by college. Admissions will be offered to the students on the basis of their Entrance Exam score.



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

B.Sc. (Data Science)   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
U24/DS1ST1	Subject- 1	Statistics for Data Science	03	--	20	30	50	2	--	2
U24/DS1SP1		Practical Course based on Statistics for Data Science	--	04	20	30	50	-	2	2
U24/DS1ST2	Subject- 2	Python Programming-I	03	--	20	30	50	2	--	2
U24/DS1SP2		Practical Course based on Python Programming-I	--	04	20	30	50	-	2	2
U24/DS1ST3	Subject- 3	Website Designing Using HTML, CSS, Bootsrapp	03	--	20	30	50	2	--	2
U24/DS1SP3		Practical based on Website Designing using HTML, CSS, Bootsrapp		4	20	30	50		2	
U24/DS1OET1	GE/OE	From College Basket	--		50	-	50	2	-	2
U24/DS1SECT1	SEC	Computational Mathematics	04		20	30	50		2	2
U24/DS1IKST1	IKS	Indian Science, Engineering & Technology (Past, Present , Future)	20		50	-	50	2	-	2
U24/DS1AECT1	AEC	Language Communication-I	30		50	-	50	2	-	2
U24/DS1VECT1	VEC	Environmental Science-I	50		50	-	50	2	-	2
Total			24	12	220	330	550	16	6	22

B.Sc. (Data Science)   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
U24/DS2ST1	Subject- 1	Mathematics for Data Science	2	-	20	30	50	2	-	12
U24/DS2SP1		Practical Course based on Mathematics for Data Science	-	4	20	30	50		2	
U24/DS2ST2	Subject- 2	Python Programming-II	2	-	20	30	50	2	-	
U24/DS2SP2		Practical Course based on Python Programming-II	-	4	20	30	50	-	2	
U24/DS2ST3	Subject- 3	Database Management System	2	-	20	30	50	2	-	
U24/DS2SP3		Practical Course based on Database Management System	-	4	20	30	50	-	2	
U24/DS2GOT1	GE/OE	From College Basket	-	4	50	-	50	2	2	2
U24/DS-2SECT1	SEC	Probability Distribution	-	4	20	30	50	-	2	2
U24/DS2AECT1	AEC	Language Communication- II	2	-	50	-	50	2	-	2
U24/VECT1	VEC	Environmental Science-II	2	-	50	-	50	2	-	2
U24/DS2CCT1	CC	Yoga Education-2/ NSS-2/ Health and Fine Arts-2/ Sports-2/Culture-2/NCC-2	2	-	50	-	50	2	-	2
Total			21	16	220	330	550	14	16	22

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

B.Sc. (Data Science)   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
U24/DS3MJCT1	Major Core	Fundamental of Data Science	3	--	20	30	50	2	--	2
U24/DS3MJCT2		Data Structure-I	3	--	20	30	50	2	--	2
U24/DS3MJCP1		Practical Course based on Data Structure-I	--	4	20	30	50	--	2	2
U24/DS3VSCT1	VSC	Inferential Statistics	3	--	20	30	50	2	--	2
U24/DS3FP	FP/CEP	Field Project	--	2	20	30	50	--	2	2
U24/DS3MNT1	Minor	Subject 2: Programming in JAVA-I Subject 3: Web Technology- I	3	-	20	30	50	2	-	2
U24/DS3MNP1		Subject 2:Practical Course based on Programming in JAVA-I Subject 3:Practical Course based on Web Technology-	-	4	20	30	50	-	2	2
U24/DS3OET1	GE/OE	From College Basket	3	--	20	30	50	2	--	2
U24/DS3IKST1	IKS	Computing in Ancient India	3	--	20	30	50	2	--	2
U24/DS3AECT1	AEC	Hindi-1/Marathi-1/Sanskrit-1	3	--	20	30	50	2	--	2
U24/DS3CCT1	CC	From College Basket	3	--	20	30	50	2	--	2
Total			24	10	220	330	550	16	6	22

B.Sc. (Data Science)   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
U24/DS4MJCT1	Major Core	Machine Learning – I	3	--				2	--	2
U24/DS4MJCT2		Data Structure - II	3	--	20	30	50	2	--	2
U24/DS4MJCP1		Practical Course based on Machine Learning-I	--	4	20	30	50	--	2	2
U24/DS4VSCT1	VSC	Practical Course based on Data Structure-II	--	4	20	30	50	--	2	2
U24/DS4CEP	FP/CEP	Community Engagement Program	-	2	20	30	50	-	2	2
U24/DS4MNT1	Minor	Subject 2:Programming in JAVA-II Subject 3: Web Technology-II	3	-	20	30	50	2	-	2
U24/DS4MNP1		Subject 2: Practical Course based on Programming in JAVA-II Subject 3: Practical Course based on Web Technology -II	-	-	20	30	50	-	2	2
U24/DS4OET1	GE/OE	From College Basket	--	4	20	30	50	--	2	2
U24/DS4SECT1	SEC	Categorical Data Analysis	3	--	20	30	50	2	--	2
U24/DS4AECT1	AEC	Hindi-2/Marathi-2/Sanskrit-2	3	--	20	30	50	2	--	2
U24/DS4CCT1	CC	From College Basket	3	--	20	30	50	2	--	2
Total			18	14	220	330	550	12	10	22

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

B.Sc. (Data Science)   SEMESTER V										
Subject Code	Course Type	Course Name	Teaching Scheme Hrs/Week		Examination Scheme and Marks			Credits		
			TH	P	CCE	EE	Total	TH	P	Total
2406MJCT501	Major Core	Machine Learning-II	3	--	20	30	50	2	--	2
2406MJCT502		No SQL Databases	3	--	20	30	50	2	--	2
2406MJCT503		Python Frameworks for Web Applications	3	--	20	30	50	2	--	2
2406MJCT504		Computer Networking	3	--	20	30	50	2	--	2
2406MJCP505		Practical Course based on Machine Learning-II	--	4	20	30	50	--	2	2
2406MJCP506		Practical Course based on Data Visualization tools	--	4	20	30	50	--	2	2
U24/DS-MNRT-507	Major Elective (Choose A or B)	A. Full Stack W eb Development -I B. Data Analytics using R	3	-	20	30	50	2	-	2
U24/DS-MNRP-508		A. Practical Course based on Full Stack Web Development B. Practical Course based on Data Analytics Using R	-	4	20	30	50	-	2	2
U24/DS-VSCP-509	VSC	Practical Course based on Python Framework for Web Applications	3	-	20	30	50	2	-	2
U24/DS-CEP-510	FP/CEP	Capstone Project Based on Data Science	-	2	20	30	50	-	2	2
U24/DS-MNRT-511	Minor	Subject 2:Object Oriented Software Engineering Subject 3 :Software Testing	3	-	20	30	50	2	-	2
Total			21	14	220	330	550	14	8	22

B.Sc. (Data Science)   SEMESTER VI										
Subject Code	Course Type	Course Name	Teaching Scheme Hrs/Week		Examination Scheme and Marks			Credits		
			TH	P	CCE	EE	Total	TH	P	Total
U24/DS-MJCT-601	Major Core	Deep Learning - I	2	--	20	30	50	2	--	2
U24/DS-MJCT-602		Data Visualization tools	2	--	20	30	50	2	--	2
U24/DS-MJCT-603		Artificial Intelligence	2	--	20	30	50	2	--	2
U24/DS-MJCT-604		Data Security and Privacy	2	--	20	30	50	2	--	2
U24/DS-MJCP-605		Practical Course based on Deep Learning-I	--	4	20	30	50	--	2	2
U24/DS-MJCP-606		Practical Course based on No sql Databases	--	4	20	30	50	--	2	2
U24/DS-MNRT-607	Major Elective (Choose A or B)	A.Full Stack W eb Development - II B.HR and Financial Analytics	2	--	20	30	50	2	--	2
U24/DS-MNRP-608		A.Practical Course based on Full Stack Web Development-II B.Practical Course based HR and Financial Analytics	--	4	20	30	50	-	2	2
U24/DS-VSCP-609	VSC	Practical Course based on Artificial Intelligence	--	3	20	30	50	2	--	2
U24/DS-CEP-610	OJT	On Job Training	--	2	20	30	50	--	4	4
Total			10	17	220	330	550	12	10	22

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

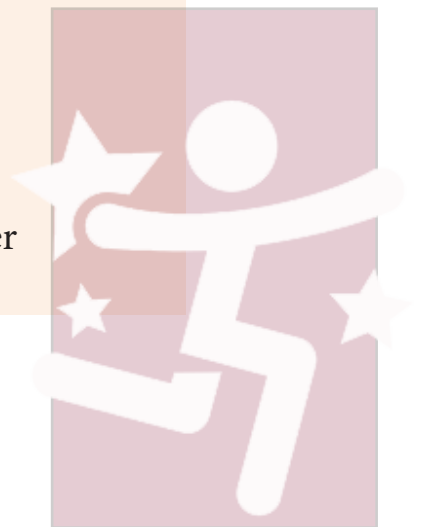
B.Sc. (Data Science)   SEMESTER VII										
Subject Code	Course Type	Course Name	Teaching Scheme Hrs/Week		Examination Scheme and Marks			Credits		
			TH	P	CCE	EE	Total	TH	P	Total
U24/DS-MJCT-701	Major Core	Deep Learning - II	5	--	40	60	100	4	--	4
U24/DS-MJCT-702		Design and Analysis of Algorithm	5	--	40	60	100	4	--	4
U24/DS-MJCT-703		Cloud Computing	3	--	20	30	50	2	--	2
U24/DS-MJCT-704		Practical Course based on Deep Learning-II	--	4	20	30	50	--	2	2
U24/DS-MJCP-705		Practical course based on Design and Analysis of Algorithm	-	4	20	30	50	--	2	2
U24/DS-MJCP-706	Major Elective (Choose A or B)	A.Natural Language Processing B.Computer Vision	3	-	20	30	50	2	-	2
U24/DS-MNRT-707		A.Practical course based on Natural Language Processing B.Practical Course Based on Computer Vision	-	4	20	30	50	--	2	2
U24/DS-MNRP-708	RM	Research Methodology	5	-	20	30	50	4	-	4
Total			21	12	220	330	550	16	6	22

B.Sc. (Data Science)   SEMESTER VIII										
Subject Code	Course Type	Course Name	Teaching Scheme Hrs/Week		Examination Scheme and Marks			Credits		
			TH	P	CCE	EE	Total	TH	P	Total
U24/DS-MJCT-801	Major Core	Deep Learning - II	5	--	40	60	100	4	--	4
U24/DS-MJCT-802		Design and Analysis of Algorithm	5	--	40	60	100	4	--	4
U24/DS-MJCT-803		Cloud Computing	3	--	20	30	50	2	--	2
U24/DS-MJCT-804		Practical Course based on Deep Learning-II	-	4	20	30	50	--	2	2
U24/DS-MJCP-805		Practical course based on Design and Analysis of Algorithm	--	4	20	30	50	--	2	2
U24/DS-MJCP-806	Major Elective (Choose A or B)	A.Natural Language Processing B.Computer Vision	5	-	20	30	50	2	-	2
U24/DS-MNRT-807A		A.Practical course based on Natural Language Processing B.Practical Course Based on Computer Vision	4	-	20	30	50	--	2	2
U24/DS-MNRP-808	RM	Research Methodology	-	2	20	30	50	-	4	4
Total			50		220	330	550	12	10	22



# Departmental Activities

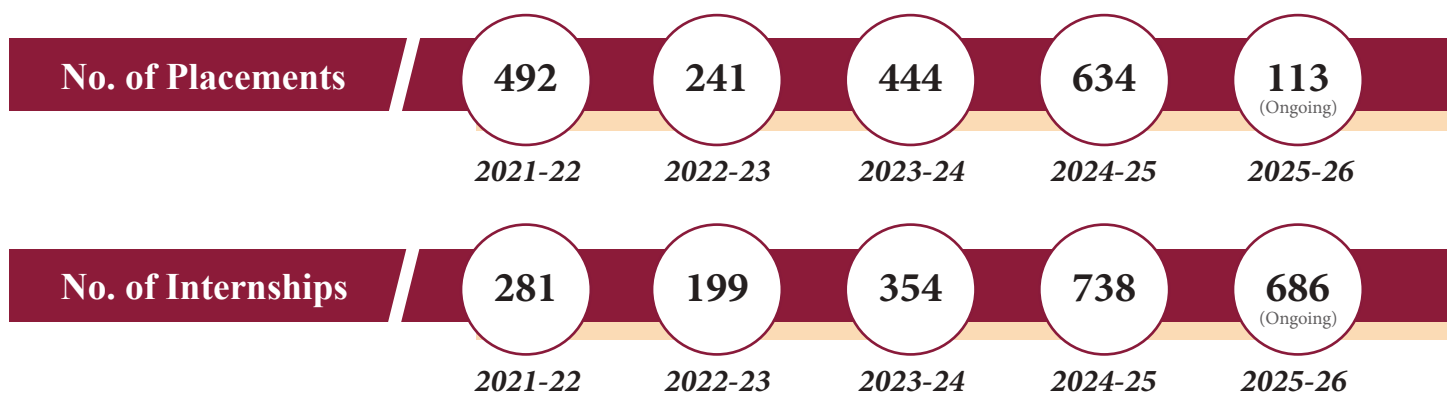
- ITFest Week-Flagship Event
- Vocational skill development sessions
- Expert Guidance Sessions
- Study Visits
- Add on courses
- Student centric evaluation system
- Student mentoring
- Workshops, Seminars, Guest interviews, Special shoot
- Awareness of Human Rights
- Professional Consultation Programs
- 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 Implementation 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.*





# MIT Arts, Commerce & Science College



Connect with Us !

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& Science College

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