MGM University

Vision

- To ensure sustainable human development which encourages self-reliant and self-content society.
- To promote activities related to community services, social welfare and also Indian heritage and culture.
- To inculcate the culture of non-violence and truthfulness through vipassanna meditation and Gandhian Philosophy.
- To develop the culture of simple living and high thinking

Mission

- To impart state of art education and technical expertise to students and give necessary training to teachers to create self-reliant society for future.
- To encourage students to participate in Indian and International activities in sports, literature, etc. so that future generation becomes base for free and liberal society
- To educate students in areas like Management, Finance, Human relations to inculcate philosophy of simple living and high thinking value of simple economic society.
- To inculcate culture of non-violence and truthfulness through Vipassana.

  To sustain activities of Indian culture (viz. classical dance, music and fine arts) through establishing institutes like Mahagami, Naturopathy, etc.

विद्यापीठ गीत

अत्त दिप भव भव प्रदिप भव,

स्वरूप रूप भव हो

ज्ञान सब्ब विज्ञान सब्ब भव,

सब्ब दिप भव हो

अत्ताहि अत्त नो नाथो,

अत्ताहि अत्त नो गति

अत्त मार्गपर अप्रमादसे है तुझे चलना

सब्ब का कल्याण हो,

वो कार्यकुशल करना

सब्ब का उत्तम मंगल, पथप्रदर्शक हो

अत्त दिप भव भव प्रदिप भव,

स्वरूप रूप भव हो

ज्ञान सब्ब विज्ञान सब्ब भव,

सब्ब दिप भव हो

बुद्धमं शरनं गच्छामि :

धम्मं शरनं गच्छामि :

संघं शरनं गच्छामि :

Jawaharlal Nehru Engineering College (JNEC) at a Glance

Jawaharlal Nehru Engineering College is a premier institute of engineering that has carved a niche for itself in the field of technical education in a very short span of time. The college has made its presence felt in the world of technical education. JNEC is a conducted college of MGM University, Chhatrapati Sambhajinagar from the academic year 2020-21.

Unique in its structure, methods and goals, the college is strongly rooted in the philosophy of training and research that enhances the relationship between knowledge and its application and seeks to promote the creation of an ideal society. The college also provides facilities for research leading to Ph. D. through its Research Center. JNEC provides a congenial atmosphere for diligent academic pursuits. This has been reflected through the results. Most of our students are among the toppers in various engineering disciplines.

Vision

To create self-reliant, continuous learner & competent technocrats imbued with human values.

Mission

- Imparting quality technical education to the students through participative teaching –learning process.
- Developing competence amongst the students through academic learning and practical experimentation.
- Inculcating social mindset and human values amongst the students.

Programs offered at JNEC

Undergraduate Programmes	Postgraduate Programmes	PhD Programmes	PG Diploma Programmes	Certificate Programmes
B. Arch. - Architecture	M. Arch. - General Architecture	Ph. D. Architecture		
B. Tech. Artificial Intelligence & Data Science	M. Arch. - Environmental Architecture	Ph. D. Chemical Engineering		
B. Tech. Chemical Engineering	M. Tech. Digital Transformation	Ph. D. Civil Engineering		
B. Tech. Civil Engineering	M. Tech. Electrical Power Systems	Ph. D. Electrical Engineering		
B. Tech. Civil Engineering with Computer Applications	M. Tech. Mechanical Engineering	Ph. D. Electronics Engineering		
B. Tech. Civil Engineering (Construction Technology)	M. Tech. Structural Engineering	Ph. D. Mechanical Engineering		
B. Tech. Computer Science & Engineering	M. Tech. VLSI & Embedded Systems	Ph. D. Computer Science & Engineering		
B. Tech. Electrical & Computer Engineering	Master of Computer Applications - MCA	Ph. D. Computer Applications		
B. Tech. Electronics & Computer Engineering				
B. Tech. Mechanical Engineering				
B. Tech. Mechanical & Mechatronics Engineering (Additive Manufacturing)				
B. Tech. Robotics & Artificial Intelligence				

Eligibility –

1. Maharashtra State Candidate.

(i) The Candidate should be an Indian National and having domicile of Maharashtra state and/or born in Maharashtra state.

(ii) Passed HSC or its equivalent examination with Physics and Mathematics as compulsory subjects along with one of the Chemistry or Biotechnology or Biology or Technical Vocational subject or Computer Science or Information Technology or Informatics Practices or Agriculture or Engineering Graphics or Business Studies, and obtained at least 45% marks (at least 40% marks, in case of Backward class categories and Persons with Disability candidates belonging to Maharashtra State only) in the above subjects taken together and the candidate should have appeared in MGMU-CET 2022/ MHT-CET 2022/ PERA CET 2022/ JEE (Main) Paper-I 2022 and should obtain non zero score in MGMU-CET 2022/ MHT-CET 2022/ PERA CET 2022/ JEE (Main) Paper-I 2022. However, preference shall be given to the candidate obtaining non-zero positive score in MGMU-CET 2022 over the candidates who obtained non-zero score in MHT-CET 2022/ PERA CET 2022.

OR

(ii)Passed Diploma in Engineering and Technology and obtained at least 45% marks (at least 40% marks, in case of Backward class categories and Persons with Disability candidates belonging to Maharashtra State only).

2. All India Candidates –

(i) The Candidate should be an Indian National.

(ii) Passed HSC or its equivalent examination with Physics and Mathematics as compulsory subjects along with one of the Chemistry or Biotechnology or Biology or Technical Vocational subject or Computer Science or Information Technology or Informatics Practices or Agriculture or Engineering Graphics or Business Studies , and obtained at least 45% marks (at least 40% marks, in case of Backward class categories and Persons with Disability candidates belonging to Maharashtra State only) in the above subjects taken together and candidate should have appeared in MGMU-CET 2022/ MHT-CET 2022/ PERA CET 2022/

JEE (Main) Paper-I 2022 and should obtain non-zero score in MGMU-CET 2022/ MHT-CET 2022/ PERA CET 2022/ JEE (Main) Paper-I 2022. However, preference shall be given to the candidate obtaining non-zero positive score in JEE Mains Paper-I over the candidates who obtained non-zero score in MGMU-CET 2022/ MHT-CET 2022/ PERA CET 2022.

OR

(ii) Passed Diploma in Engineering and Technology and obtained at least 45% marks (at least 40% marks, in case of Backward class categories and Persons with Disability candidates belonging to Maharashtra State only)

Name of Faculty: Engineering and Technology

Name of the College/Institute/Department/School: JNEC **Name of the Programme**: Engineering

Programme Type (UG/PG): UG **Duration:** 4 Years

First Year - Semester I (Group A)												
Course Category	**Course Code**	**Course Title**	**Nature of Course**	**No. of Credits**	**Teaching (Contact hrs/ week)**		**Evaluation Scheme (Marks)**			**Minimum Passing (Marks)**		
					L	**P**	**Internal**	**External**	**Total**	**Internal**	**External**	**Total**
BSC	APS21BSL 101	Single and Multivariable Calculus	Theory	4	4	-	60	40	100		16	40
BSC	APS21BSL 102	Engineering Physics	Theory	3	3	-	60	40	100		16	40
ESC	APS21ESL 101	Python Programming	Theory	2	2	-	60	40	100		16	40
ESC	APS21ESL 102	Engineering Graphics	Theory	2	2	-	60	40	100		16	40
AEC	MGM54AEL101	Communicative English	Theory	1	1	-	30	20	50		8	20
VSEC	APS21VSP 101	Engineering Exploration	Practical	2	-	4	60	40	100		16	40
BSC	APS21BSP 101	Engineering Physics Lab	Practical	1	-	2	30	20	50		8	20
ESC	APS21ESP 101	Python Programming Lab	Practical	1	-	2	30	20	50		8	20
ESC	APS21ESP 102	Engineering Graphics Studio	Practical	2	-	4	30	20	50		8	20
ESC	APS21ESP 103	Recent Trends in Integrated Technology	Practical	1	-	2	30	20	50		8	20
AEC	MGM54AEP101	Communicative English Lab	Practical	1	-	2	30	20	50		8	20
CCA	MGM82CCP101 MGM82CCP102 MGM82CCP103	NCC / Yoga / Sports	Practical	2	-	4	30	20	50		8	20
Total				22	12	20	510	340	850	0	136	340

Note:
Nature of Course : L- Lecture, P-Practical, S-Seminar, J-Project, I-Internship, D-Dissertation,

Course Category: MM-Major Mandatory, ME-Major Elective, MI-Minor, OE-Generic / Open electives, VSC-Vocational skill course, SEC-Skill Enhancement course, AEC-Ability Enhancement course, IKS-Indian

Knowledge system, VEC-Value Education course, OJT-On Job Training / Internship / Apprenticeship, FP-Field project, CEP-Community engagement and service, CC-Co – curricular course, RM-Research methodology, RP-Research project

First Year- Semester II (Group A)												
Course Category	**Course Code**	**Course Title**	**Nature of Course**	**No. of Credits**	**Teaching (Contact hrs/ week)**		**Evaluation Scheme (Marks)**			**Minimum Passing (Marks)**		
					L	**P**	**Internal**	**External**	**Total**	**Internal**	**External**	**Total**
BSC	APS21BSL103	Linear Algebra and Differential Equations	Theory	4	4	-	60	40	100	-	16	40
BSC	APS21BSL104	Engineering Chemistry	Theory	3	3	-	60	40	100	-	16	40
ESC	APS21ESL103	Engineering Mechanics	Theory	2	2	-	60	40	100	-	16	40
ESC	APS21ESL104	Building Programming logic in C	Theory	1	1	-	30	20	50	-	8	20
PCC	APS21PCL101	Basics of Electrical and Electronics Engineering	Theory	2	2	-	60	40	100	-	16	40
IKS	APS21IKL1XX	Indian Knowledge System	Theory	2	2	-	60	40	100	-	16	40
VSEC	APS21VSP102	Workshop Practices	Practical	2	-	4	60	40	100	-	16	40
BSC	APS21BSP102	Engineering Chemistry Lab	Practical	1	-	2	30	20	50	-	8	20
ESC	APS21ESP104	Engineering Mechanics Lab	Practical	1	-	2	30	20	50	-	8	20
ESC	APS21ESP105	Building Programming logic in C Lab	Practical	1	-	2	30	20	50	-	8	20
PCC	APS21PCP101	Electrical and Electronics Technology Lab	Practical	1	-	2	30	20	50	-	8	20
CCA	MGM82CCP104 MGM73CCP105 MGM73CCP106	NSS/ Fine Art/ Visual Art	Practical	2	-	4	30	20	50	-	8	20
Total				22	14	16	540	360	900	0	144	360

Note:

Nature of Course : L- Lecture, P-Practical, S-Seminar, J-Project, I-Internship, D-Dissertation,

Course Category: MM-Major Mandatory, ME-Major Elective, MI-Minor, OE-Generic / Open electives, VSC-Vocational skill course, SEC-Skill Enhancement course, AEC-Ability Enhancement course, IKS-Indian Knowledge system, VEC-Value Education course, OJT-On Job Training / Internship / Apprenticeship, FP-Field project, CEP-Community engagement and service, CC-Co – curricular course, RM-Research methodology, RP-Research project

Level 4.5 Award of UG certificate with 40 credits and an additional 4-credits core NSQF course / internship OR continue with major and minor

First Year - Semester I (Group B)												
Course Category	**Course Code**	**Course Title**	**Nature of Course**	**No. of Credits**	**Teaching (Contact hrs/ week)**		**Evaluation Scheme (Marks)**			**Minimum Passing (Marks)**		
					L	**P**	**Internal**	**External**	**Total**	**Internal**	**External**	**Total**
BSC	APS21BSL101	Single and Multivariable Calculus	Theory	4	4	-	60	40	100	-	16	40
BSC	APS21BSL104	Engineering CHEMISTRY	Theory	3	3	-	60	40	100	-	16	40
ESC	APS21ESL101	Python Programming	Theory	2	2	-	60	40	100	-	16	40
ESC	APS21ESL103	Engineering Mechanics	Theory	2	2	-	60	40	100	-	16	40
AEC	MGM54AEL101	Communicative English	Theory	1	1	-	30	20	50	-	8	20
PCC	APS21PCL101	Basics of Electrical and Electronics Engineering	Theory	2	2	-	60	40	100	-	16	40
VSEC	APS21VSP102	Workshop Practices	Practical	2	-	4	60	40	100	-	16	40
BSC	APS21BSP102	Engineering Chemistry Lab	Practical	1	-	2	30	20	50	-	8	20
ESC	APS21ESP101	Python Programming Lab	Practical	1	-	2	30	20	50	-	8	20
ESC	APS21ESP104	Engineering Mechanics Lab	Practical	1	-	2	30	20	50	-	8	20
AEC	MGM54A	Communicative	Pract	1	-	2	30	20	50	-	8	20

	EP101	English Lab	ical									
PCC	APS21PCP101	Electrical and Electronics Technology Lab	Practical	1	-	2	30	20	50	-	8	20
CCA	MGM82CCP101 MGM82CCP102 MGM82CCP103	NCC / Yoga / Sports	Practical	2	-	4	30	20	50	-	8	20
Total				23	14	18	570	380	950	0	88	64

First Year - Semester II (Group B)

Course Category	Course Code	Course Title	Nature of Course	No. of Credits	Teaching (Contact hrs/ week)		Evaluation Scheme (Marks)			Minimum Passing (Marks)		
					L	P	Internal	External	Total	Internal	External	Total
BSC	APS21BSL103	Linear Algebra and Differential Equations	Theory	4	4	-	60	40	100	-	16	40
BSC	APS21BSL102	Engineering Physics	Theory	3	3	-	60	40	100	-	16	40
ESC	APS21ESL102	Engineering Graphics	Theory	2	2	-	60	40	100	-	16	40
IKS	APS21IKL1XX	Indian Knowledge System	Theory	2	2	-	60	40	100	-	16	40
ESC	APS21ESL104	Building Programming logic in C	Theory	1	1	-	30	20	50	-	8	20
VSEC	APS21VSP101	Engineering Exploration	Practical	2	-	4	60	40	100	-	16	40
BSC	APS21BSP101	Engineering Physics Lab	Practical	1	-	2	30	20	50		8	20
ESC	APS21ESP102	Engineering Graphics Studio	Practical	2	-	4	30	20	50		8	20
ESC	APS21ESP105	Building Programming	Practical	1	-	2	30	20	50		8	20

		logic in C Lab										
ESC	APS21ESP103	Recent Trends in Integrated Technology	Practical	1	-	2	30	20	50		8	20
CCA	MGM82CCP104 MGM73CCP105 MGM73CCP106	NSS/ Fine Art/ Visual Art	Practical	2	-	4	30	20	50		8	20
Total				21	12	18	480	320	800	0	128	320

First Year - Semester II (Group A)												
Course Category	**Course Code**	**Course Title**	**Nature of Course**	**No of Credits**	**Teaching (Contact hrs/ week)**		**Evaluation Scheme (Marks)**			**Minimum Passing (Marks)**		
					L	**P**	**Internal**	**External**	**Total**	**Internal**	**External**	**Total**
BSC	APS21BSL103	Linear Algebra and Differential Equations	Theory	4	4	-	60	40	100	-	16	40
BSC	APS21BSL104	Engineering Chemistry	Theory	3	3	-	60	40	100	-	16	40
ESC	APS21ESL103	Engineering Mechanics	Theory	2	2	-	60	40	100	-	16	40
ESC	APS21ESL104	Building Programming logic in C	Theory	1	1	-	30	20	50	-	8	20
PCC	APS21PCL101	Basics of Electrical and Electronics Engineering	Theory	2	2	-	60	40	100	-	16	40
IKS	APS21IKL1XX	Indian Knowledge System	Theory	2	2	-	60	40	100	-	16	40
VSEC	APS21VSP102	Workshop Practices	Practical	2	-	4	60	40	100	-	16	40
BSC	APS21BSP102	Engineering Chemistry Lab	Practical	1	-	2	30	20	50	-	8	20
ESC	APS21ESP104	Engineering Mechanics Lab	Practical	1	-	2	30	20	50	-	8	20
ESC	APS21ESP105	Building Programming logic in C Lab	Practical	1	-	2	30	20	50	-	8	20
PCC	APS21PCP101	Electrical and Electronics Technology Lab	Practical	1	-	2	30	20	50	-	8	20
CCA	MGM82CCP104 MGM73CCP105 MGM73CCP106	NSS/ Fine Art/ Visual Art	Practical	2	-	4	30	20	50	-	8	20
		TOTAL		22	14	16	540	360	900	0	144	360

First Year - Semester I (Group B)												
Course Category	**Course Code**	**Course Title**	**Nature of Course**	**No of Credits**	**Teaching (Contact hrs/ week)**		**Evaluation Scheme (Marks)**			**Minimum Passing (Marks)**		
					L	**P**	**Internal**	**External**	**Total**	**Internal**	**External**	**Total**
BSC	APS21BSL101	Single and Multivariable Calculus	Theory	4	4	-	60	40	100	-	16	40
BSC	APS21BSL104	Engineering CHEMISTRY	Theory	3	3	-	60	40	100	-	16	40
ESC	APS21ESL101	Python Programming	Theory	2	2	-	60	40	100	-	16	40
ESC	APS21ESL103	Engineering Mechanics	Theory	2	2	-	60	40	100	-	16	40
AEC	MGM54AEL101	Communicative English	Theory	1	1	-	30	20	50	-	8	20
PCC	APS21PCL101	Basics of Electrical and Electronics Engineering	Theory	2	2	-	60	40	100	-	16	40
VSEC	APS21VSP102	Workshop Practices	Practical	2	-	4	60	40	100	-	16	40
BSC	APS21BSP102	Engineering Chemistry Lab	Practical	1	-	2	30	20	50	-	8	20
ESC	APS21ESP101	Python Programming Lab	Practical	1	-	2	30	20	50	-	8	20
ESC	APS21ESP104	Engineering Mechanics Lab	Practical	1	-	2	30	20	50	-	8	20
AEC	MGM54AEP101	Communicative English Lab	Practical	1	-	2	30	20	50	-	8	20
PCC	APS21PCP101	Electrical and Electronics Technology Lab	Practical	1	-	2	30	20	50	-	8	20
CCA	MGM82CCP101 MGM82CCP102 MGM82CCP103	NCC / Yoga / Sports	Practical	2	-	4	30	20	50	-	8	20
		TOTAL		**23**	**14**	**18**	**570**	**380**	**950**	**0**	**152**	**380**

Semester- V (2021-2022)																		
Course code*	Course Title	Type	Teaching Scheme			Evaluation Scheme						Minimum Passing						Credit
						Internal			External		Total	Internal			External		Total	
			L	T	P	CA	MSE	TW	ESE	PR		CA	MSE	TW	ESE	PR		
20UCI501D	Analysis of structure-II	Theory	3	1	-	20	20	-	60	-	100	-	-	-	24	-	40	4
20UCI502D	Design of Steel Structure	Theory	3	-	-	20	20	-	60	-	100	-	-	-	24	-	40	3
20UCI503D	Geotechnical Engineering	Theory	3	-	-	20	20	-	60	-	100	-	-	-	24	-	40	3
20UCI504D	Applied Geology	Theory	2	-	-	10	10	-	30	-	50	-	-	-	12	-	20	2
20UCI505D	Transportation Engineering	Theory	3	-	-	20	20	-	60	-	100	-	-	-	24	-	40	3
20UCI506D	Environmental Engineering -I	Theory	3	-		20	20	-	60	-	100	-	-	-	24	-	40	3
20UCI507L	Geotechnical Engineering Lab	Practical	-	-	2	-	-	25	-	25	50	-	-	10	-	10	20	1
20UCI508L	Applied Geology Lab	Practical	-	-	2	-	-	25	-	25	50	-	-	10	-	10	20	1
20UCI509L	Environmental Engineering -Lab	Practical	-	-	2	-	-	25	-	-	25	-	-	10	-	-	10	1
20UCI510L	BIM Lab-I	Practical	-	-	2	-	-	25	-	-	25	-	-	10	-	-	10	1
	Total		**17**	**1**	**8**	**110**	**110**	**100**	**330**	**50**	**700**	**-**	**-**	**40**	**132**	**20**	**280**	**22**

Semester- VI																		
Course code*	Course Title	Type	Teaching Scheme			Evaluation Scheme						Minimum Passing						Credit
						Internal			External		Total	Internal			External		Total	
			L	T	P	CA	MSE	TW	ESE	PR		CA	MSE	TW	ESE	PR		
20UCI601D	Design Of Concrete Structures-I	Theory	3	1	-	20	20	-	60	-	100	-	-	-	24	-	40	3
20UCI602D	Environmental Engineering-II	Theory	3	-	-	20	20	-	60	-	100	-	-	-	24	-	40	3
20UCI603D	Highway& Airport Engineering	Theory	3	-	-	20	20	-	60	-	100	-	-	-	24	-	40	3
20UCI604D	Foundation Engineering	Theory	3	-	-	20	20	-	60	-	100	-	-	-	24	-	40	3
20UCI6065D	Quantity Survey and Estimate	Theory	3	-	-	20	20	-	60	-	100	-	-	-	24	-	40	3
	Elective-I																	
20UCI606E	Engineering Management – Process and People Management	Theory	3	-	-	20	20	-	60	-	100	-	-	-	24	-	40	3
20UCI607E	Construction Techniques																	
20UCI608E	Geospatial Data Analysis and Applications																	
20UCI609L	Highway Engineering Lab	Practical	-	-	2	-	-	25	-	25	50	-	-	10	-	10	20	1
20UCI610L	Quantity Survey and Estimate Lab	Practical	-	-	4	-	-	25	-	25	50	-	-	10	-	10	20	2
20UCI611L	Design Of Steel Structure Lab	Practical	-	-	4	-	-	25	-	25	50	-	-	10	-	10	20	2
20UCI612L	BIM Lab-II	Practical	-	-	2	-	-	50	-	-	50	-	-	20	-	-	20	1
	Total		**18**	**1**	**12**	**120**	**120**	**125**	**360**	**75**	**800**	**-**	**-**	**50**	**144**	**30**	**320**	**24**