

CLARION

Newsletter

Department of Mechanical & Production Engineering
MuffakhamJahCollege of Engineering & Technology,Hyderabad.

ANNUAL ISSUE OF THE YEAR 2019-20

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Assistant Professor, M.E.D.
- Mr. Syed Adil,
Assistant Professor, M.E.D.

QUOTES:

- “The function of education is to teach one to think intensively and to think critically. ... Intelligence plus character—that is the goal of true education.” —[Martin Luther King Jr](#)
- “The roots of Education.. are bitter, but the fruit is sweet” – [Aristotle](#)
- “Any one who stops learning is old, whether at twenty or eighty, Anyone who keeps learning stays young” – [Henry Ford](#).

VISION AND MISSION THE DEPARTMENT

Vision: To produce high caliber, competent, industry oriented Mechanical Engineers

Mission: To impart quality education by providing state of art technical facilities and enhance the professional abilities to meet the demands of the ever-changing manufacturing industry. News Letters, edited, printed & published by News Letter Committee, Department of Mechanical Engineering, MJCET-500034.



Supra Technical Workshop (STW 2020)

Supra Technical Workshop (STW) was conducted for all the teams participating in SAE Supra 2020 competitions in Mechanical Engineering Department of MuffakhamJah College of Engineering and Technology, Banjarahills, Hyderabad on Sunday, 23rd February, 2020.

SAE-BAJA 2022

The workshop was organized by SAE-MJCET Chapter in collaboration with SUPRA SAE INDIA. SAE INDIA has invited Dr. Y. SreenivasRao, Scientist-H, DRDO & Project Director, R.C.I. as Chief Guest for the workshop. Three members from SUPRA SAEINDIA committee were appointed to discuss the SAE SUPRA Rule Book and addressed the queries of the students related to supra competitions. The SAE Committee Members were accompanied by Dr. GururajTelasang, Scientist, Metal Additive Manufacturing, ARCI & Dr. Venkateshwar Reddy, Head MED, MLRIT who visited the college MJCET as the representative of SAE INDIA Southern Section. Total of 18 Teams (67 Students) from the SAE Southern Section visited MJCET to attend the Workshop. Dr. Mohd. ViqarMohiuddin, Associate Head, MED, introduced the college & facilities available in MED and discussed about the participations & achievements of SAE MJCET Chapter in various events and competitions conducted by SAE INDIA. The Chief Guest Dr. Y. SreenivasRao, addressed the gathering and enlightened the participants by his experiences as a scientist in Defence Research and Development Organization.

The workshop sessions were handled by Mr. Bibhu Kumar, Mr. Gagandeep Singh and Mr. SulaimanShaik - the trainers from Supra SAE INDIA committee. The sessions were then continued till 03:45 p.m. After the queries session the SAE committee members were felicitated by the mementoes and the workshop was concluded with a vote of thanks.

RESEARCH AND DEVELOPMENT -MJCET

DEPARTMENT ACTIVITIES:

Seminar / Workshops/ Refresher Programme Conducted By The Department:

- Technologies for Sustainable Ecosystem (TSE-19) was conducted from 1st to 3rd March 2019.



A Conference on Technologies for Sustainable Ecosystem (TSE-19) was conducted from 1st to 3rd March, 2019 at Seminar Hall, MJCET. The conference coordinators were Dr. IshratMeeraMirzana and Mrs. Lakshmi Kumari, Faculty Advisors for Engineers without Borders (EWB)-MJCET student chapter.

Academic Awards Function:*Academic awards (2017-18) distribution function*

- Department of Mechanical Engineering has organized Academic Awards Function 2017-2018 in Seminar Hall, MJCET on 29th February 2020 for the toppers of B.E. Mechanical engineering, Production engineering and M.E. CAD/CAM students. Students from each year and each branch are felicitated and provided with the Academic Excellence Certificate and Cash prize for achieving in top three positions. Dr. Mohammed ViqarMohiuddin, Dr. IshrathMeeraMirzana, Dr. Mohammed Mohinoddin, and Dr. D. SrinivasRao, senior faculty members of Mechanical engineering department distributed the certificates and prizes. Dr. A. S. Reddy, Retd. Prof. MED, MJCET was present as a chief guest of the Awards function.
- A Guest Lecture on Taguchi methods was organised by Dr. Syed FerhatullahHussainy, Dean Student Affairs, MJCET on 19th August 2019.
- A trainings session on “ Solid Cast was organised on 21st August 2019, by Dr.Mohd. Viqar Mohiuddin, Professor, MED, MJCET.
- An Industrial Visit to Surana Industries was arranged to 2nd, 3rd and 4thyear Mechanical and Production Engineering Students on 16th September 2019.

RESEARCHPROJECTS:**In-house R & D projects:**

Four projects of MED are approved in the year 2019-20.

- Amount of Rs.85000 (Rupees Eighty Five Thousand Only) is granted for the project titled “**Single use plastic to fuel conversion system**” in October, 2019. The project is under the guidance of Dr. IshratMeeraMirzana, Professor, MED and (ii) Dr. M.G.V. Satyanarayana, Assistant Professor, Chemistry Dept.
- Amount of Rs. 61,581/- (Rupees Sixty one Thousand five hundred and eighty one Only) is granted for the project titled “**Aerial Surveillance Robird**” in October, 2019. The project is under the guidance of Dr. (Mrs.) G. Sailaja, Assistant Professor, MED and (ii) Mrs. B. Sucharita, Assistant Professor, ECED.
- Amount of Rs. 60,000/- (Rupees Sixty Thousand Only) is granted for the project titled “**Upper Exo-skeleton**” in October, 2019. The project is under the guidance of Dr. K. HemaLatha, Assistant Professor, MED, (ii) Mrs. B. Sucharitha, Assistant Professor, ECED and (iii) Mr. ShaikRasool, Assistant Professor, ITD.
- Amount of Rs. Rs.43,050/- (Rupees Forty Three Thousand Fifty Only) is granted for the project titled “**Experimental and CFD analysis of various airfoil profiles used in wind turbines**” in October, 2019. The project is under the guidance of Mr. S. IrfanSadaq, Assistant Professor, MED.

PAPERS PUBLISHED / PRESENTED BY FACULTY MEMBERS:

- MohdHasham Ali, S. IrfanSadaq& Dr. Syed Nawazish Mehdi, published paper on “Analysis of Two Bladed Vertical Axis Wind Turbine Using CFD”, in JETIR, Volume 6, Issue 5, May 2019, ISSN-2349-5162.
- Dr. IshratMeeraMirzana, online International Conference on "Challenges and Opportunities in Aeronautics, Astronautics and Aviation" on 30th and 31st May, 2020.
- Dr. IshratMeeraMirzana, International Conference on Transformations in Engineering Education (ICTIEE 2020), 5th Jan to 8th Jan, 2020.
- Dr. IshratMeeraMirzana and Mr. Rajeev Lal, Published paper on “Engineers for Future” in Journal of Engineering Education Transformations, Volume 33, January 2020, Special issue, eISSN 2394-1707.
- V Anandkumar&N.Govind, Published paper on “Effect of post-weld heat treatment on dissimilar friction stir welded AA6082 AND A319 aluminium alloys” in International Journal of Mechanical and Production Engineering Research and Development, ISSN(P):2249-6890;ISSN(E):2249-8001 Vol.9, Issue 4, Aug 2019, 1335-1342.
- V Anandkumar&N.Govind, Published paper on “Effect of tool pin profile and friction stir welding speed on tensile & hardness properties of friction stir welded joints of AA6082 & A319 Aluminium alloy” in International Journal of Innovative Technology and Exploring Engineering, ISSN:2278-3075, Volume-8, Issue-12, October 2019.
- V Anandkumar&N.Govind, Published paper on “Effect of welding parameters on mechanical and microstructural properties of dissimilar AA6082–A319 joints produced by friction stir welding” in International Journal of Mechanical Engineering and Technology, ISSN (P):0976-6340; ISSN (O):0976-6359, Vol 10, Issue-12, Dec 2019, 284-293.

ACHIEVEMENTS BY FACULTY MEMBERS:

- Dr. IshratMeeraMirzana was a speaker in at the Annual IUCEE Student Forum 2020 (IASF 2020) from Jan 5 to 7, 2020.
- Dr. IshratMeeraMirzana Conducted webinars for (i) The NorthCap University, Gurugram, Haryana, (ii) St. Patrician college of Arts and Sciences, chennai and (iii) St. Josephs College of Engineering and Technology, Chennai.
- Mr. Syed KhadarBasha, Assistant Professor, MED was awarded the Ph.D. degree from JNTU Hyderabad on 21st May 2019.
- Mrs. G. Sailaja, Associate Professor, MED was awarded the Ph.D. degree from J.N.T.U., Hyderabad n 3rd June 2019.
- Mrs K. Hemalatha, Associate Professor, MED was awarded the Ph.D. degree from Osmania University, Hyderabad on 11th June 2019.
- Mr. SirajuddinEliyasKhanny, Associate Professor, MED was awarded the Ph.D. degree from Mewar University, Gangrar, Chittorgarh in December 2019.
- Dr. N. Seetharamaiah, Professor & Head MED resigned the duty and was relieved from the services of MJCET on 29-07-2019.

- Dr. Syed Ferhathullah Hussainy, Professor, MED is appointed as Head of the Mechanical Engineering Department with effect from 21-11-2019.
- Dr. K. Hema Latha, Assistant Professor, MED, MJCET is promoted to Associate Professor with effect from 01-12-2019.
- Dr. G. Sailaja, Assistant Professor, MED, MJCET is promoted to Associate Professor with effect from 01-12-2019.
- Dr. Mohammed Sadak Ali Khan, Professor, MED has participated in the “Capacity Building and Participatory Training Programme for Nodal Officers of Participating Institutions of Unnat Bharat Abhiyan, Telangana held during 26th to 28th August, 2019 at National Institute of Rural Development and Panchayati Raj, Rajendranagar, Hyderabad.

➤ **Patents Published:**

- A patent has been published on 03/01/2020 on the Government website of Indian Patent Office for Patent Application titled A PNEUMATIC QUADRUPED ROBOT AND A METHOD OF PREVENTING ACCIDENTS THEREOF.
- A patent has been published on 03/01/2020 on the Government website of Indian Patent Office for Patent Application titled PROCESS AND SYSTEM FOR EFFICIENT BIODIESEL PRODUCTION.

SAE (SOCIETY OF AUTOMOTIVE ENGINEERS)

SAE INDIA MJCET Chapter:

- **SAE**– “Society of Automotive Engineers” is one of the largest student organizations in automotive Industry. **SAE INDIA** is an affiliate society of **SAE International** registered in India as an Indian nonprofit engineering and scientific society dedicated to the advancement of mobility industry in India. **SAE INDIA MJCET chapter** was started in the year 2005. Since its inception the students of the club are consistently participating in all the events organized by the SAE INDIA.
- **MJCET Team participation in SAE – BAJA 2020 Competitions:**
SAE-India is India’s leading resource for mobility technology and BAJA is a flag ship event of it. Over the years, BAJA has grown in popularity and has become a bigger event nationally. It serves as a platform for young Engineering students to showcase their talent, skills and acquire a real time experience while overcoming obstacle and challenges. The 13th edition of BAJA SAE-2020 is different scenario in terms of the level of vehicles, testing tracks and competitions. The event is organized at NATRAX, Peethampur, Indore, MP state during 22nd – 26th January 2020. Team MJCET participated in the event and the details are reported as follows.
- **Virtual BAJA (Pre selection):** In the month of July 2019, MJCET team has prepared a detailed design report and appeared for virtual BAJA selections at CHITKARA UNIVERSITY, PUNJAB. The team has cleared aptitude and technical tests and presented design report. The team got short listed. Team has then registered for main BAJA 2020 conventions. **Vehicle fabrication:** Team has fabricated the ALL TERRAIN VEHICLE in three months. Vehicle un-veiling and flag off was organized on 10th January 2020 and vehicle got dispatched by road transport on 18th January 2020. The team has reached at the conventions and registered for the competitions. Total of 176 teams have registered for M – BAJA and E – BAJA categories.
- **Technical Inspection:** Team has prepared the vehicle and appeared for Technical Inspection, where in all parameters and specifications as per rule book are thoroughly inspected by the judges. The vehicle net

weight is measured to be 188.8 Kgs. MJCET team has taken 2 days to clear the Technical Inspection of their vehicle.

- Team along with vehicle appeared for static events like cost evaluation, Design Evaluation and Marketing strategy Evaluation and scored well in these presentations. Soon after completing Technical Inspection, team went for Brake test on 25th January 2020.



MJCET team stands at 7th rank in the final endurance test nationwide and achieved 1st rank in Telangana and Andhra Pradesh States in the overall ranking.

RECRUITMENT DRIVE

Five students of MJCET were short listed in the aptitude test and psychometric test. Technical and HR interviews were conducted on 27th and 28th January 2020. Two students were selected in the recruitment by reputed automobile companies at SAE – BAJA 2020 conventions like Anand Motors and ARAI, Pune.

MJCET Team Participation in SAE- Supra 2019 Competitions

Mechanical & Production engineering students of MuffakhamJah College of Engineering and Technology, Banjarahills, Hyderabad, designed and fabricated a Formula Racing Vehicle and participated in the National Level Engineering Student Formula Car Racing Competition **SUPRA SAE INDIA 2019** held at Buddh International Circuit – Country's International Formula car racing track in Greater Noida, scheduled from 15th to 20th July 2019. The event was organized by SAEINDIA, **SUPRA** (Super Racing) is a National Level Technical Competition where Teams from Various Engineering Colleges, including IIT's & NIT's Design and Fabricate a Formula Style Racing Vehicle to compete with the other. In SAE SUPRA competition, the students are to assume that a manufacturing firm has engaged them to produce a prototype car for evaluation as a production item. The Team MJCET have designed and fabricated the Supra vehicle which gets its power from RC 390 KTM engine. The vehicle was high on performance and goes at a top speed of 100kmph with unmatched acceleration due to its light weight. The team was consisting of 25 members from B.E. Final and Pre-final Mechanical and Production Engineering. The Team was headed by Mr. Abdul RahmanSufiyan – Captain, Dr.Mohd. ViqarMohiuddin and Dr. D. SrinivasRao were the Faculty Advisors.

The Fabrication cost of the car was around Rs. 5.00 Lakhs and Total cost of the Project was Rs. 7.0 Lakhs (which includes cost of the car, registration, transportation, food, accommodation, etc.). The project is sponsored by *The Sultan-ul-Uloom Educational Society*.



Supra Team MJCET - Technical Inspection Bay at Buddh International Circuit, Greater Noida.

EWB (Engineers Without Borders):

EWB-MJCET Chapter was started in the year 2005 as the first student chapter of EWB-India and has been the most active student chapter in the country. It currently has 150 members.

EWB-INDIA MISSION

The mission is driven by an urge and concern for accelerating sustainable rural development, assisting in capacity building in backward rural and urban communities of India, protecting the country's natural resource base and working across national boundaries for social and economic justice and responsible use of technology.

EVENTS CONDUCTED BY EWB-MJCET

- EWB-WEEK has been conducted as a part of activities which are planned during the academic year 2019-2020. It was a week program which was conducted during October 15-19, 2019 all the activities were successfully carried out with good participation. The chief coordinators were AmruthSagar, Sujeeth Kumar & Ahmed.
- IGENUS 2020: This was conducted in January 17 & 18 2020, the activities included are as follows; Cyclothon; Krack It If You Can; Take the Task; Quizzle; Model Uno.
- As a part of mission of EWB, EWB-MJCET has promoted to use jute bags instead of plastic and sustain environment.
- Airtel Marathon: The students of EWB-MJCET have volunteered for Airtel Marathon which was held on August 22, 2019. More than 50 students have participated for the event.
- Plantation Drive which was done as a part of EWB-WEEK 2019-2020, Eco Drive: The main objective of this activity was to promote for Eco Friendly environment, this was carried out in the Govt. High School.
- Paper collection Drive: The main focus was to collect the unused papers, books, envelopes etc., and after few Kgs are collected all this material was donated to Nachiket Tapovan, an Orphanage School.



Plantation Drive by EWB- MJCET



Paper collection Drive: by EMB-MJCET

EWB Projects:

➤ Construction of Class Rooms for ZillaParishad High School (Z.P.H.S)

GOWDAVALLI Village near Medchal, Hyderabad. EWB-MJCET student chapter had been actively working on a project of constructing the additional school building at zillaparishad high School (Z.P.H.S). This project worth Rs. 60 lakh was sponsored by PRATT & WHITNEY and Cyient. In addition to school building the student where also involved landscaping of school and acquiring science lab equipment.

➤ Fuel Briquettes Project.

EWB-India has developed/adapted simple technology to use easily available agro waste materials as cooking fuel. Fuel Briquettes can be made from most organic waste materials easily and are relatively pollution

free. EWB-India has been working in this area for the last 2 years. Three different types of Briquetting equipment have been experimented with to produce fuel briquettes and also improve productivity.

➤ **Water Sump Project (MJCET Hyderabad chapter, water) :**

Construction of underground Water sump at Government High School, Goudapalli at Rasoolpura, Hyderabad was undertaken. This project was successfully initiated and completed by the students of EWB MJCET Chapter in association with BHUMI Foundation. The mission of the project was to provide the school with an underground sump, which can store water up to 5000 litres. This water can be used for drinking and sanitation. On the completion of this project, now the school has the basic water storage and distribution facility, easy accessible water for drinking and sanitation purposes.

Awards:

- EWB-MJCET has won the Best Chapter Award, during EWB All Chapters Meet held at BITS, Goa. Dr. IshratMeeraMirzana was a speaker in all chapters meet of EWB-India at Bangalore on 10th and 11th, 2020.
- EWB –MJCET Students were awarded as the Best Team for Volunteering for AIRTEL MARATHON which was organized by Airtel Tele-Services.

UBA (UnnatBharathAbhiyan):

Unnat Bharat Abhiyan (UBA), is inspired by the vision of transformational change in rural development processes by leveraging knowledge institutions to help build the architecture of an Inclusive India.

Ministry of Human Resources Development (MHRD), Government of India has launched the national program called Unnat Bharat Abhiyan, with the vision to involve professional and higher educational institutions in the development process of rural areas in the country to achieve sustainable development and better quality of life. IIT HauzKhas, New Delhi has been designated to be the National coordinating Institute by the Ministry. Our Institution has agreed to participate in UBA as a Participating institute (PI). Dr. Mohammed Sadak Ali Khan, Professor, MED, MJCET has been duly authorized in this regard from our side to carry on the activities of UBA in our organization as project coordinator. Under the UBA program every participating institute is to adopt a cluster of five villages in consultation with the District Collector. Five villages allotted to our institute are: GudiThanda, Hanuman Nagar, DasugaddaThanda, ThunikilaThanda, and KoyyagunduThanda in the Sangaraddy District, Telangana.





Faculty Coordinator along with Faculty members of MED visit to allotted villages for the initial survey

STUDENT PLACEMENT INFORMATION

S. No.	Organization	Mechanical	Production	M.E. (CAD/CAM)	CTC / Remuneration offered
1	TCS	02	--	--	Rs. 3.5 Lakhs P.A
2	Infosys	2	--	--	Rs. 3.6 Lakhs P.A.
3	Amazon	4	1	--	Rs. 2.7 Lakhs P.A.
Total Jobs Offered		08	01	00	TOTAL = 09 Nos.

MERIT LIST - UNIVERSITY RANKS

➤ List of **University Ranks** obtained by the students of Mechanical Engineering for the batch 2016-20

S.No	Roll Number	Name of the Student	Percentage Secured	OU-Rank
1	1604-16-736-075	Mohammad Abdul Basheer	86.32	II
2	1604-16-736-017	Mohd Abdul Razzak	86.62	III
3	1604-16-736-018	Syed FayezullahHussaini	85.11	IV
4	1604-16-736-024	Syed Azhar	84.24	VI
5	1604-16-736-020	Syed Imaduddin Ahmed	84.00	VII
6	1604-16-736-095	MuzammilBaig	83.84	VIII
7	1604-16-736-103	Abdullah	83.57	IX
8	1604-16-736-007	MurtuzaKhat	83.36	X

➤ List of **University Ranks** obtained by the students of Production Engineering for the batch 2016-20

S.No	Roll Number	Name of the Student	Percentage Secured	OU-Rank
1	1604-16-738-012	Mohammed Sohail	76.14	I
2	1604-16-738-025	Mir Osman Ali Khan	72.53	II
3	1604-16-738-015	Syed Faizuddin	72.52	III
4	1604-16-738-044	Mohammed Salman Hashmi	72.42	IV
5	1604-16-738-026	MohdShoebHussain	70.63	V
6	1604-16-738-010	Syed RizwanLateef	70.02	VI
7	1604-16-738-008	ReddivariSaiAakash Reddy	67.13	VII