

## University Report 2016-17

KLEF is the metamorphosis of Koneru Lakshmaiah College of Engineering (KLCE) established in 1980, situated in a spacious campus on the banks of Buckingham Canal of river Krishna, eight kilometers from Vijayawada city. Built within a rural setting of lush Green Fields, the Institute is a virtual paradise of pristine nature and idyllic beauty. The campus has been aptly named “Green Fields” and the splendid avenue of trees and gardens bear testimony to the importance of ecology and environment. It has a memorable journey of about 35 years packed with remarkable landmark achievements. It began its sojourn as an affiliated College of the Acharya Nagarjuna University Accredited twice by NBA got its autonomous status in the year 2006, and scored Highest CGPA 3.76 / 4.00 among Engineering institutes in India in NAAC accreditation and was recognized as Deemed to be University in 2009. Again in 2013 it was re accredited by NAAC with A grade.

The campus ambience is most befitting for scholastic pursuits. The number and quality of faculty have the greatest impact on the performance of an educational institution. The University has a strength of 943 teaching faculty. The faculty comprises a sizable team of 366 Ph.Ds. and more than 350 faculty are pursuing their PhD. The Faculty-student ratio is maintained at 1:14. The University organizes several orientation and faculty development programs to make them well equipped for the various teaching – learning mechanisms that prevail in the University. Learning at KLEF combines active and reflective styles and student-centric methods like lab taken to class (LTC) and problem solving, focused listening methodologies with the help of ICT, LMS and e-learning resources. The examination system is fully automated and has the state-of-the-art facilities to declare results within ten days after the conduct of the examinations. There are special provisions for educating the challenged categories.

The University’s Hallmarks and best practices were studded with accolades and honours right through the year.

- "India Rankings 2016 and 2017" released by MHRD conferred 59<sup>th</sup> and 68<sup>th</sup> Rank in the Top Best Engineering Institutions in India (including IITs & NITs). It amounts to 1st Rank in the Top Best Engineering Institutions in Andhra Pradesh State & Telangana.
- Our university got All India 2nd Rank in Swachhta Institute Rankings -2017 given by MHRD, GOI.
- Our university got 1st Rank in Clean & Green Campus Award for South Central Region by AICTE.
- K L E F has received the National Energy Conservation award from MHRD, Govt. of India-2017.
- Institution is certified by ISO 9001 - 2015
- Four students of K L are declared as University Innovation Fellows (UIF) in a global program organized by D school of Stanford University.
- The institute is recognized as a Public Funded Research Institute by DSIR of Government of India, a recognition for the excellent research environment in the institute.
- A mentor is allotted for each 15 students to counsel the students in their academic as well as personal problems.
- University has a separate Communication & Soft Skills (CSS) dept. with more than 40 professional trainers.

- University is a member in the prestigious “All India Virtual Class Room” initiated by MHRD. This network enables the students to take advantage of the facilities such as virtual class rooms, virtual laboratories, journal sharing through online, video conference lectures and many more.
- An advisory board in every department with top academicians from IITs & foreign universities and eminent personalities from industries.
- University has a strong Industry Relations & Placement Department (IRP) and has been consistent in achieving 100% Placements for registered eligible students during past 12 years.
- Freshman Engineering Dept. (FED) is a unique feature for 1st year Engineering students.
- A separate student welfare and guidance division headed by dean-student welfare is maintained.
- University has 74 academic laboratories, 25 research laboratories, 6 industry collaboration labs and 8 centres of excellence.
- Research Oriented Problem Solving Techniques.
- 2.6Gbps ILL + 1Gbps NKN hi-speed internet connectivity round the clock in the campus and in the hostels.
- Discipline is the hallmark with 100% ragging free environment.
- First academic institution in India to have Wi-Fi 'n' enabled campus.
- e-Learning mode of teaching is practiced in the campus.
- Entrepreneurship Cell is formed in association with IIT Madras, IIM Ahmedabad.
- Yoga and meditation classes organised for the students.

**Other facilities available are:**

- Technology forums & hobby clubs are formed for students.
- Excellent facilities with international standards for all kinds of indoor & outdoor games & sports with coaches for all major games & sports available.
- Facilities like PCO/STD/ISD, Fax, Post Office are available on campus.
- Banking/ATM facilities available from State Bank of India with in the campus.

## **Curricular Aspects**

KLEF offers 52 programs providing a number of program options leading to different degrees in UG, PG, and Ph.D programs in the disciplines of Engineering, Science, Management, Pharmacy, Arts, Law and Commerce. The curriculum design and development takes care of the local needs collected from a study of the ten thrust areas identified by the APIIC, Govt of Andhra Pradesh. The main focus is on the priority areas specified by CII, Planning Commission, and Department of Higher Education which are incorporated in various programs covering the prime needs such as Employability, Human Resource Development and contributions to social Development and National Economy.

Another major area of focus is development of high-skilled human resources to meet future global challenges successfully. These objectives are built into the curriculum at the micro level where the students are to satisfy the POs, PSOs and COs. About 83% of the designed programs are in sync with the Global, National and local needs of employability and entrepreneurship.

The curriculum principally aims at the holistic development of students. In order to achieve this a provision is made for additional courses and activities not directly linked to one's discipline of

study. These courses sensitize students to cross-cutting issues like Environment and sustainability, Human values, Gender issues etc.

The syllabi are revised from time to time based on current global trends and also stakeholders feed-back. A wide range of value-added courses are offered across all disciplines catering to the Economic, Societal and Environmental needs of the nation.

The following programs are being offered by the university

<b>Serial Number</b>	<b>Program</b>	<b>Level of programs</b>	<b>Number of discipline in which the program is offered</b>
1.	4 Year program	Under Graduate	<ol style="list-style-type: none"> <li>1. Bio Technology</li> <li>2. Civil Engineering</li> <li>3. Computer Science &amp; Engineering</li> <li>4. Electronics &amp; Communications Engineering</li> <li>5. Electronics &amp; Computers Engineering,</li> <li>6. Electrical Electronics Engineering,</li> <li>7. Mechanical Engineering</li> <li>8. Petroleum Engineering</li> <li>9. B. Pharmacy</li> </ol>
2.	5 Year Programs	Undergraduate	<ol style="list-style-type: none"> <li>1. B. Arch</li> <li>2. BBA.LLB (LAW)</li> </ol>
3.	3 Year programs	Undergraduate	<ol style="list-style-type: none"> <li>1. B. Com (Hons) in Accounting &amp; Finance</li> <li>2. B.Sc. in Visual Communication (B.Sc.–VC)</li> <li>3. B.F.A</li> <li>4. Bachelor of Hotel Management</li> <li>5. BBA (Bachelors of Business Administration)</li> <li>6. Bachelor of Computer Applications(BCA) in Cloud Technology &amp; Information Security</li> <li>7. B.A with integrated IAS Coaching (Civil Services)</li> </ol>
8.	5 Year integrated program	UG + PG	<ol style="list-style-type: none"> <li>1. BBA + MBA</li> </ol>
9.	2 Year Programs in Management and Humanities	PG	<ol style="list-style-type: none"> <li>1. MBA Programs               <ol style="list-style-type: none"> <li>I. General Management with functional specialization,</li> <li>II. Technology Management,</li> <li>III. Health Care &amp; Hospital Management,</li> <li>IV. Banking and Financial Services</li> </ol> </li> <li>2. M.Sc - Chemistry</li> </ol>
10.	One Year	PG	LL.M
11.	2 Year Programs in Engineering	PG	M. Tech Programs <ol style="list-style-type: none"> <li>1. Bio Technology</li> <li>2. Computer Science &amp; Engineering</li> <li>3. Computer Networks &amp; Security,</li> <li>4. Cloud Computing</li> <li>5. Communications &amp; Radar Systems</li> </ol>

			6. Power Systems 7. Power Electronics & Drives 8. Mechatronics 9. Thermal Engineering 10. Structural Engineering 11. Construction Technology and Management 12. Environmental Engineering 13. VLSI 14. Embedded Systems 15. Geo-Spatial Technology 16. Cyber Security & Digital Forensics 17. Space Technology and Atmospheric Science 18. Wireless Communication and Sensor Networks
12.	3 Year full time PhD Programs  4 year part time PhD programs	Doctoral	Full-time and Part-Time programs in various disciplines of Science, Engineering, Management and Humanities.  1. Bio Technology 2. Civil Engineering 3. Computer Science and Engineering 4. Electronics and Computer Engineering 5. Electrical and Electronics Engineering 6. Electronics and Computer Engineering 7. Mechanical Engineering 8. Management 9. Commerce 10. Mathematics 11. Physics 12. Chemistry 13. English 14. LAW

Salient features of B Tech academic structure of KLEF include:

- Highly flexible academic structure including options to select instructors in a multi-section course, being able to choose elective courses within and across the disciplines, opting for degree with specialization and degree with interdisciplinary minor.
- Practice School (internship in industry) of one-semester duration in either of the semesters in B Tech final year.
- Students working on Term Papers in all core courses with a view to inculcate research aptitude.
- Project based labs and open labs are commissioned.

In addition to the aforementioned academic flexibilities, our University also offers several operational flexibilities, such as:

- Change of Branch at the end of 1st year B Tech program of study.
- Repeating a course for improving CGPA.
- Withdrawal and substitution of an elective course.

- Summer term courses for weaker students as well as for quality-performers to earn honors degree and dual degree.

## **Teaching-learning and Evaluation**

KLEF organizes orientation programs for Fresher's to acclimatize them to the Engineering environment. While Fresher's day is conducted to make a general introduction to the students and the faculty, a few specific tests are conducted to assess academic and general aptitude levels. After a few weeks of the B.Tech semester, program a Diagnostic test is held and students are classified into Advanced and slow learners. The advanced learners are provided Training that incorporates self-training/learning methods like Technical debates, Video Synthesis, brainstorming, Peer reviews, etc. The slow learners are brought to desirable levels by conducting One minute paper, Think/plan/share, Role plays which focus on improvement of listening comprehension and guided communication. Separate committees are constituted to cater to the specific needs of students from other states and nations.

Active and Reflective modes of learning are implemented at KLEF. Student-Centric methods such as Lab-taken to-class (LTC), Learning management system (LMS) and e-Learning resources are implemented. All the programs offered by the university have clearly defined POs, PSOs and COs and the outcomes are assessed through direct and indirect methods, while PEOs are assessed through indirect method. A fully automated examination system employs some modern evaluation methods and rubrics that expedite the processing of evaluation and the declaration of results.

The quality of the Teaching-Learning process is assessed through student satisfaction survey and based on it more innovative practices are introduced from time to time. The involvement of the stake-holders' interest, and the transparency of the system substantially strengthen the teaching-learning systems at KLEF.

## **Research, Innovations and Extension**

Research has been the prime focus since the inception of KLEF University. The institution is committed to transferring empirical knowledge to applicable reliable practices, replacing individual brilliance with collective, corroborative, societal utility.

The university has identified the necessary infrastructural and intellectual resources for Academic Research, Sponsored Research, Consultancy and Extension. In a two-pronged approach R&D at KLEF has established seven research centres and formalized the research curriculum. All the research centres are provided full-time experienced faculty. Each research centre is headed by a professor Emeritus as mentor with 10 to 15 young faculty as mentees. This facilitates continuous transfer of skills and expertise and enhances the overall research capability.

Publications have taken a quantum step towards quality improvement after specifications regarding Scopus Indexed journals and cadre-wise targets were released. Substantial increase in publication is noticed with a H-index of 30.

KLEF has established an ecosystem to promote innovations including a centre for Innovation, Incubation and Entrepreneurship development leading to start-ups in different disciplines.

KLEF has initiated promotion of institutional social responsibility through activities undertaken in the neighbourhood rural community. They aim at combining social needs, Professional expertise and skilful implementation of schemes. From 2012 KLEF extension activities centre (EAC) has taken up several initiatives to launch programs involving the faculty, students and the local inhabitants.

The faculty are encouraged to take up projects from Government as well as Non-government Agencies. Till now they have bagged funded projects worth 94.31 crores from NGOs and Rs. 29.01 crores from Government sources.

Grants for research projects sponsored by the government sources during the last five years (Amount in Rupees)

S. No	Name of the Project/ Endowments, Chairs	Name of the Principal Investigator/ Co Investigator	Department	Funds provided in Lacs. Rs.	Duration of the project
1	Isolation, identification and characterization of protein pollen allergens of Indian origin	Dr. B. J. K.Singh/ Dr.B.V.Raman	BT	10.13	3 Years
2	Studies on flue gas fed microalgae for alternative fuel production	Dr. R. S. Reddy	BT	10.36	3 Years
3	Design for optimization of phased array antennas	Dr. P. Siddaiah	ECE	10.26	3 Years
4	Design feasibility study and realization of a single directional antenna for L & S bands	Dr. P. Siddaiah	ECE	13.44	3 Years
5	RF Front end Receivers spurious/ Harmonic analysis	Dr. P. Siddaiah	ECE	8.25	3 Years
6	Development of an expert system for design of an optimum manipulator for any medical/ surgical robot with the incorporation of neural network & fuzzy logic concepts for sensing.	Dr. A. Srinath	ME	7.69	3 Years
7	Systematic studies of phase stability in dimeric liquid crystals	Prof. V.G.K.M. Pisipati	ECE	26.00	3 Years
8	Prediction of Propagation Impairments for Ku & Ka Band Satellite Links – Real Time Monitoring & Analysis for Communications/ Services	Dr. K. Sarat Kumar	ECE	11.00	3 Years
9	Optical studies on nano-particles doped liquid crystals	Mrs.D. Madhavi Latha Dr.V.G.K.M.Pisapati	ECE	14.58	3 Years

10	CO <sub>2</sub> Mitigation and Cultivation of oil rich microalgae for Bio-fuel production	Dr. R. Srinivasa Reddy	BT	20.91	3 Years
11	Molecular characterization of plant Endo-N-Acetylglucosaminidases (ENGase)	Dr. B. J. K. Singh	BT	16.47	3 Years
12	Absorption and emission characteristics of earth doped glasses for efficient lasers	Ms.Swapna Koneru /Dr.A.Srinivasa Rao	Physics	21.70	3 Years
13	Global studies on ionospheric density irregularities during quiet time using space-based remote sensing techniques	Dr. Gouthu Uma	ECE	19.30	3 Years
14	Web description and building models for sensors to discover knowledge for prediction and decision making	Dr. K. Raghava Rao	ECM	15.54	3 Years
15	Systematic Designing of compact slot antennas for wireless LAN applications	Ms.S.Srijaya Lakshmi	ECE	24.55	3 Years
16	Experimental Studies on Ku and Ka-band Satellite Signal Propagation Impairments	Mrs.I. Govardhani /Dr.K.Sarat Kumar	ECE	25.50	3 Years
17	Communication Platforms using the Low Cost Transceivers setup's for Quick Establishment and Operation during Disaster Situations	Ms.K. Ch. Sri Kavya/Dr.K.Sarat Kumar	ECE	25.45	3 Years
18	An integrated process development of continuous sequestration of CO <sub>2</sub> and the production of value added products	Mrs.K. Chandrika / R.Srinivasa Reddy	BT	26.00	3 Years
19	Securing the Embedded Systems from side channels	Ms.Deevi Radha Rani / S.Venkateswarlu	CSE	21.60	3 Years
20	Design of Low Cost Amateur Radio SATELLITE Compatible Transceiver Setup's for Operation and Quick Establishment of Communication Platforms during Disaster Situations (A Means to Save the Life during Disasters)	Dr. K. Sarat Kumar	ECE	9.28	1 Year
21	Experimental investigation of thermo-mechanical properties of natural fiberreinforced composite materials.	Dr.A.Srihari Prasad	ME	8.70	1 Year

22	Spectral Studies of Neodymium doped glass and glass ceramics for efficient laser action	Mrs.Sk.Mahamuda /A.Srinivasa Rao	Physics	14.98	3 Years
23	Screening the mitigation of carcinogenic PAHs and CO emissions of flue gases by microbial consortia	Mrs.G.Swapna / Dr.B. J. K. Singh	BT	22.40	3 Years
24	Insilico approaches to multitarget ligand designing and assay based screening of Acetylcholinesterase inhibitors	Dr.T.Venkateswara Rao	BT	27.20	3 Years
25	Novel Biorefineries : Design and process development for production of high value products and biofuels from microalgal consortium	Dr. R. Srinivasa Reddy	BT	60.81	3 Years
26	Allergen Epitope Mapping and In vivo screening of Pro-inflammatory Cytokines	Dr.B.J.K.Singh	BT	12.29	1 Year
27	Development of Ionospheric forecasting models for satellite based Navigation systems over low latitude stations	Dr.D.Venkata Ratnam	ECE	21.33	3 Years
28	Design and Development of Robotic Set up for Cardio Pulmonary Disorders - Emphasis on Cardiac Resuscitation	Dr. A. Srinath	ME	17.71	3 Years
29	Development and Characterization of Nano-structured conducting polymer electrolyte system for electrochemical cell applications	Mrs.N.Krishna Jyothi Dr.K.Vijay Kumar	Physics	23.80	3 Years
30	Characterization of Pollen specific Polygalacturonase of Sorghum bicolor	Ms.Shechinah Felice Choragudi Dr.B.Jayakumar Singh	BT	19.40	3 Years
31	Study of Dynamical Coupling between Ionospheric and Earth's Atmosphere subject to Meteorological and Seismic Disturbances over Coastal area (Guntur) by installing GPS receiver	Mrs.R.Revati Dr.K.S.Ramesh	ECE	26.50	3 Years
32	Application of Therapeutic sugar producing lactic acid bacteria in diabetes and obesity management	Dr.M.Sudhamani	BT	25.00	3 Years
33	Targeted Delivery of Nanoparticle to Enhance DR5-DDX3 Mediated Apoptosis in Tumour Environment	Dr.B.Mahendran Dr.K. Vijaya Kumar	BT	42.95	3 Years



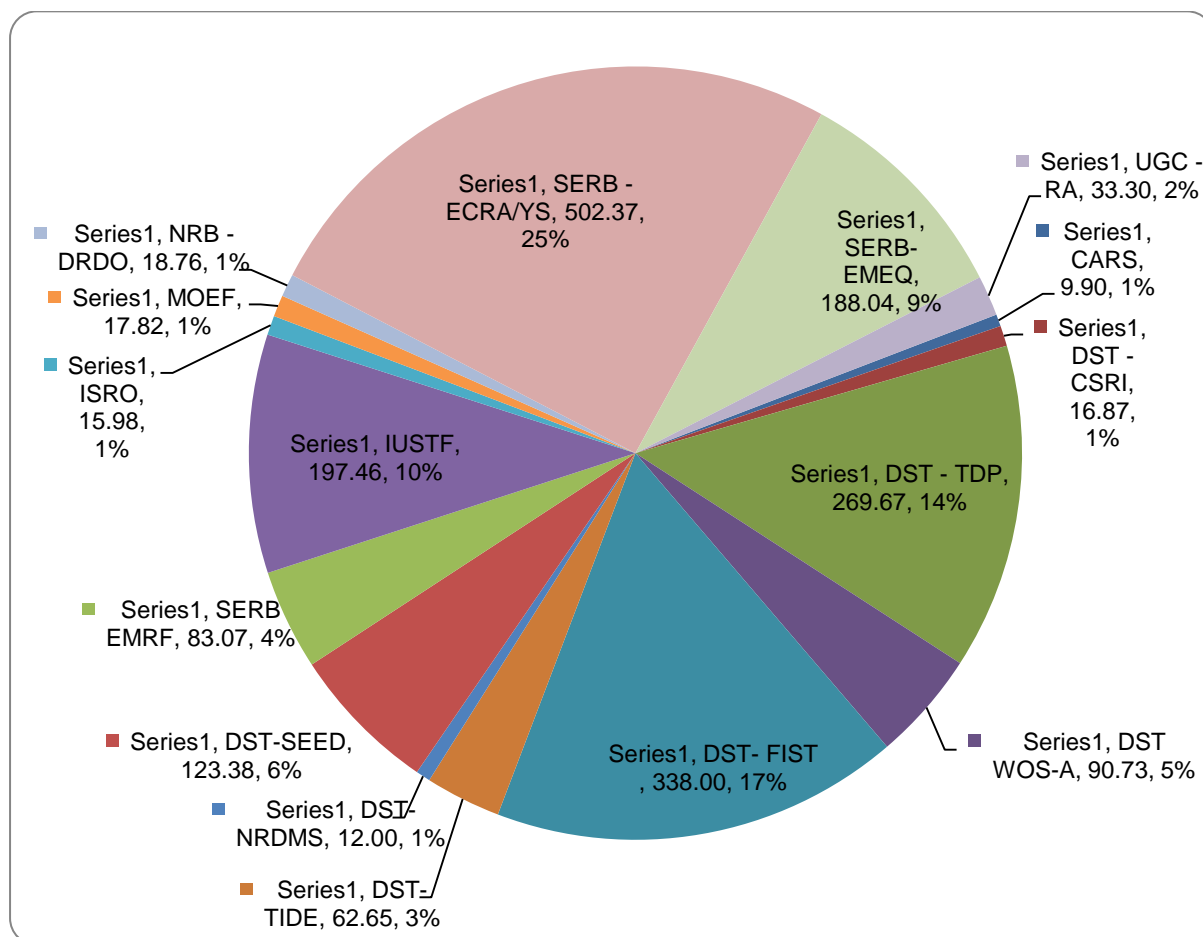
34	Ku band propagation impairments studies over Indian region to develop rain attenuation contours and suitable models	Dr.K.Sarat Kumar Dr.D.Venkata Ratnam	ECE	39.81	3 Years
35	Matching and Shaping of Material Employing WEDM	Dr. K.L.Narayana	ME	13.75	1 Year
36	Study of Subtropical Ionospheric Electron Irregularities and Seismo-Ionospheric Perturbations using GPS Recivers - Reg.	Dr.K.Satya Ramesh Dr.D.V.Ratnam	ECE	31.11	3 Years
37	Depth Resolution and Sizing Studies in Thermal Wave Detection and Ranging (TWDAR)	Dr.G.V.Subba Rao / Dr. M.Ravibabu	ECE	29.47	3 Years
38	Antennas, RF & Microwave Engineering	Dr. Habibullah Khan	ECE	55.00	5 Years
39	Robotics & Mechtronics Lab	Dr. Y.V. Hanumanta Rao	ME	55.00	5 Years
40	Centre for Atmosphere Science Research Studies	Dr. D.V.Ratnam	ECE	47.00	5 Years
41	Internet of things (IoT) Research Laboratory	Dr. V. Srikanth	CSE	45.00	5 Years
42	Fuzzy based space vector PWM Controlled shunt hybrid active power filter for power conditioning	Mr.J.Somlal	EEE	19.20	3 Years
43	Development of electrochemical Immunosensor as a prostate cancer diagnostic tool	Dr.B.Pradeep Kumar	CHE	20.00	3 Years
44	Identification and characterization of DDX3 interactive proteins in the development of Breast Cancer	Dr.B.Mahendran	BT	27.15	2 Years
45	Development of ELISA based diagnostic kit for the plant pollen cross reactive allergens	Dr.B.Jaya Kumar Singh	BT	34.69	2 Years
46	Development of CPR Apparatus using AI interface	Dr.A.Srinath	ME	35.92	2 Years
47	A Study on Financial Inclusion in Krishna District.	Dr.P.Raja Babu	MBA	7.00	2 Years
48	Maximum Power Point Tracking Applications for DC Distribution System by Integration of Buck-Boost Converter.	Mr.Maddila Srikanth	EEE	27.79	3 Years
49	Screening and Characterization of SNP associated Sex linked Biomarkers	Ms.Ch.Chitralekha Dr.B.Mahendran	BT	23.10	3 Years
50	Isolation and Characterization of Human COX-2 Inhibitors from Cyperus scariosus R.Br rhizomes	Ms.K.Lavanya Dr.B.Mahendran	BT	23.65	3 Years

51	Red mud as an adsorbent for removal of pollutants	Dr.G.V.Krishna Mohan	CHE	17.82	3 Years
52	Integration of Strategic Tactical and Operational Level Planning of Scheduling in Flexible Manufacturing System	Mr.M.Nageswara Rao	ME	28.92	3 Years
53	Development and Performance Evaluation of Controlled Techniques for Multi-Point Clamped Inverter fed Direct Torque Control Induction Motor Drive.	Dr.Obbu Chandra Sekhar	EEE	34.41	3 Years
54	Analysis and Design of Concentric Circular Ring Microstrip Patch Antenna	Dr.Kumar Naik	ECE	35.50	3 Years
55	Synthesis, characterization and evaluation of nanostructured spinel thin-film LiMn <sub>2</sub> O <sub>4</sub> cathode active materials with hetero valent multi ion insertion: Application for rechargeable microbatteries.	Dr.A.Venkateswara Rao	ME	37.54	3 Years
56	Advanced Submarine Target Motion Analysis	Dr.S.Koteswara Rao	ECE	18.76	3 Years
57	Creation of Andhra Pradesh Coastal Environmental Information System (APCEIS) using Remote Sensing & GIS	Dr.A.Siva Sankar	CE	12.00	
58	Performance Analysis of Ka-Band Reconfigurable Antennas for Fade Mitigation in Earth Space Paths	Dr.K.Ch.Sri Kavya	ECE	38.93	3 Years
59	A topology for multiple generation system with doubly fed induction machines and indirect matrix converter	Ms.N. Lavanya / Dr.O.Chandrasekhar	EEE	23.48	3 Years
60	Metabolic Engineering Lab	Dr.K. Srinivasulu	BT	67.00	5 Years
61	Rural Women Technology Park in Tadepalle Mandal (Vaddeswaram Village), Guntur District, Andhra Pradesh	Dr M. Sreedevi Dr A.V.S Kamesh Dr B. Jaya Kumar Singh Dr K. Srinivasulu	CSE	86.22	3 Years
62	Developing Nutritional Security and Economic Empowerment of Rural Women Throgh Community based approach in selected villages of Tadepalli Mandal, Guntur District.	Mrs. K. Hemamalini	Hotel MGM T	24.67	3 Years

63	"SERB School on Computational Meteorology"	Prof.D.V. Bhaskara Rao / Dr.G.China Satyanarayana	ECE	19.60	1 Month
64	Subsurface analysis using compressed infrared imaging	Dr.G.V.Subba Rao	ECE	16.82	2 Years
65	Stimulation of adoptive Kalman Filter for unmanned Air craft vehicles (UAV) 2015-17	Dr.D.Venkata Ratnam / Dr.S.Koteswara Rao	ECE	16.32	2 Years
66	Transcriptome analysis of Chilli against drought	Dr. S.R.Krishna Motukuri	BT	8.52	2 Years
67	An ultra sensitive electrochemical sensing platform for prostate cancer diagnosis at early stage	Dr.B.Pradeep Kumar	CHE	7.96	2 Years
68	Xenomai OS porting on i.Mx6 dual core processor	Mr.Sripath Roy Kognati	ECE	9.90	2 Years
69	Three phase to five phase transformation using transformer and five leg inverter to drive the five phase induction motor.	Ms. B.Jyothi	EEE	21.62	3 Years
70	Development of an expert system for career assessment based on cognitive models	Dr.V.Chandra Prakash	CSE	16.87	3 Years
71	Visual - Verbal Machine Interpreter Fostering Hearing Impaired and Elderly	Dr.P.V.V.Kishore	ECE	62.65	3 Years
72	Organocatalytic enantioselective synthesis of biologically active heteroaryl compounds	Dr.S.Vijaya Laxmi	CHE	11.00	3 Years
73	Organocatalytic Enantioselective Synthesis of Biologically Active Heteroaryl Compounds	Dr.S.Vijaya Laxmi	CHE	15.51	3 Years
74	"Electron Energy Level Estimation Of Diluted Magnetic Quantum Nano Hetero Structures."	Dr.Ch. Rajesh	Phy (ECE)	34.51	3 Years
75	Spectral Characterization of Rare Earth ions doped telluride glasses for Optoelectronic materials applications	Dr. Swapna Koneru	Phy (EEE)	44.33	3 Years
76	Development, Testing and Optimization of MRF dampers	Dr. K.V. Ramana	ME	295.92	3 Years
77	An Effective Co-operative MAC Protocol in Multi-Channel Multi-Radio Environment of Cognitive Wireless Mesh Networks	Ms. Anusha Marouthu / Dr.V.Srikanth	CSE	20.50	3 Years

78	Validation of the Dropsize Distribution Models Over Indian Region for Rain Attenuation Studies	Mrs. Chandrika Panigrahi, Dr. Habibulla Khan (Mentor)	ECE	19.20	2 Years
79	Application of pullulan based Edible Active Films and Coatings (EAFC's) in shelf life extension and packaging of fresh produce	Mr. G.V.S Rama Krishna / Dr.V.Bhadramurthy	BT	12.49	3 Years
80	Development of Conformal Liquid Crystal Polymer based Reconfigurable Antenna for Vehicular Band Applications	Dr B T P Madhav	ECE	43.01	3 Years
81	Preparation and Characterization of Rare Earth ions doped Oxide, Fluoride and Oxy - Fluoride Glasses/Glassy Ceramics for Fiber Lasers and Optical Fiber Amplifier	Dr. Mahamuda Shaik	ECE	52.03	3 Years
82	Design Fabrication and Characterization of MEMS Bio-Sensor for Detection of Cholera and Diarrhea	Dr Srinivasa Rao Karumuri, Mr. M. Durga Praskash	ECE	31.55	3 Years
83	Develooppment of Ionospheric TEC Data Assimilation Model based on Kalman Filter using Ground and Space based GNSS and Ionosonde observations	Dr Devanaboyina Venkata Ratnam Dr S. Koteswara Rao	ECE	17.32	3 Years
84	Developing and Setup IOT Lab & IOT Testbed	Dr. K. Raghava Rao	ECM	69.00	5 Years
85	High rate biomethanation of organic waste for generation of power for off-grid applications	Dr. Yerramalli Anjaneyulu	CAES	197.46	3 Years
86	Biochemical and Molecular Characterization of Snake Venom Metalloproteinases and Disintegrins from Cobra Venoms	Dr. Chandrasekhar Chanda	BT	43.27	3 Years
87	Development of Single Frequency Ionospheric correction & plasma bubble detection algorithms using GAGAN & NavIC TEC observations.	Dr. D. Venkat Ratnam /Dr.M.Sridhar	ECE	15.98	2 years
88	Investigations on Implantable Conformal Antennas for the Biomedical Applications	Dr. Kumar Naik K	ECE	38.06	3 Years
89	Design and Development of RF-MEMS based Reconfigurable Antenna for Body Area Network Applications	Dr. M. Siva Kumar	ECE	41.45	3 Years

90	Heat Waves over india: Analysis, Prediction and Risk Assessment	Dr Gubbala China Satyanarayana	ECE	29.10	3 Years
91	Mapping of fusion (F) and attachment (G) glycoprotein regions of Nipah virus (NiV) to identify potential drug targets against NiV	Dr Bhadra Murthy Vemulapati / Dr.B.J.K.Singh	BT	68.04	3 Years



The University has also provided support to faculty and students to participate in national and International Seminars, Conferences and other events. Last year has witnessed a greater focus on building research facilities augmented by funding from various national funding agencies. New labs have been added during this year. Resources have been generated by the faculty through sponsored research projects which has added value to their research and technology development. Faculty members of the University have actively involved themselves in consultancy projects from various organizations. During this year more than 20 research and consultancy projects from various funding agencies have been sanctioned with a total budget outlay of over Rs. 7 crores. I offer congratulations to the faculty members for getting these grants. I am sure that the number of extramural projects will further increase during this year.

In addition, numerous schemes under internal funding for faculty who need institutional support for kick-starting their research and innovations are available. Such efforts lead to better

teaching and research outcome. Seed Money is sanctioned to some of the faculty to realize their dream research ideas.

The faculty members of KLEF have been active in doing research and publishing papers in journals and conference proceedings as evident from the total number of publications which is 3541 in SCOPUS / SCI journals. The papers have been getting many more citations than before thereby pushing up the 'h' index to 30. Some of the faculty members of the University have also published books around 43 in the last three years.

It is credible that the Research and Development Cell of the University organizes every year INSPIRE programs and Science Fair under the auspices of the Department of Science & Technology (DST) . More than 800 school children benefit by interacting with top class scientists of the country.

S.No.	Description	Details
1	No of Books Published (Last 3 Years)	43
2	Sponsored Projects	105
3	Scopus Publications	3541
4	Scopus h-Index	30
5	No of Student Publications	351
6	UGC Research Awards	7
7	Young Scientists Awards	21
8	Women Scientist	18
9	DST- FIST Sponsored Departments	5
10	No of International Conferences Organized	21

The University has organized 23 International and National seminars, Conferences and Workshops. To name a few: SPACES 2015, ICAESW 2015, RABAEB 2015 NCBR 2015 etc.

## Research Centers of Excellence

The University has been pursuing with its policy of engaging its faculty members in carrying out high-end research in emerging areas of national and international importance. Research laboratories for Communication and Atmospheric Sciences have been established. Various Centers of Excellence like Center of Excellence for VMware, Center of Excellence for E M C, Center of Excellence for iii (Petrofac), Center of Excellence for IPsoft, Center of Excellence for Wipro, Center of Excellence for C-DAC and Center of Excellence for Embedded Applications have been established and are operational.

Sl. No.	Name of Excellence Centre	Name of the Professor In-charge
1	VMware	Mr. B. Thirupathi Reddy, Associate Professor, CSE
2	E M C	Dr. K.V.D. Kiran, Assistant Professor, CSE
3	iii (Petrofac)	Dr. Ravindra Dadaji Jilte, Professor, ME
4	IPsoft	Mr. M. Vishnuvardhan, Associate Professor, CSE
5	Wipro	Dr. Y. Prasanth, Professor, CSE & Mr.K. Ravindranath, Assistant Professor, CSE
6	C-DAC	Dr. K. Raghava Rao, Professor, ECM
7	NI Centre of Excellence	Dr. K. Srinivasa Rao, Professor, ECE
8	Embedded Applications	Dr. P. Satyanarayana, Associate Professor, ECE

## Infrastructure and Learning Resources

All the organizational units of KLEF are located in 6 blocks. KLEF has Wi-Fi enabled classrooms with LCD projectors Audio-system and with adequate ventilation. The growth of infrastructure keeps pace with academic developments for effective and efficient conduct of academic programmes. KLEF has a well-organized maintenance department to implement MMS. Major portion of the budget is allocated for augmentation of infrastructure. In addition, 21% of the budget is apportioned for maintenance of physical and academic support facilities.

A healthy body ensures a healthy mind, KLEF encourages student participation in various sports & games and all necessary facilities are provided. To help students to explore the instinctive, intuitive and creative energies of students KLEF provides a platform through KLUSO, where cultural interests like histrionics, music and traditional and western dance are showcased.

The university has a policy to establish and enhance IT facilities to promote vertical and horizontal mobility for research and advancement in teaching and learning methods. A centralized server is operational 24/7 to provide uninterrupted IT services with a bandwidth of Internet connectivity of 3.16GBPS. The university provides econtent development such as media centre covering photography lab, production control room, Central computer lab, Audio-recording studio etc.,

The university spends an annual average of Rs.1.26 crores on infrastructural resources and management.

## Central Library

The Central Library is an essential component of the University's outstanding research and education mission and occupies a place of pride in the University. The university has established a huge library that meets the requirements of the students, scholars and the faculty. The three-floored Central library is fully automated and air-conditioned with over 1.5 lakh hard copies of books and journals, e-books, rare books and databases.

Serial Number	Type of Resource	Numbers/ Memberships
	Book Volumes	1,68,449
	Book Titles	37,619
	Online Journals	35,600
	e-books	32,98,166
	International Hard Copy Journals	102
	National hard Copy Journals	271
	Magzines	115
	Memberships and subscriptions	INFLIBNET DELNET NPTEL E-shodhsindhu Shodhganga National digital Library British council Library ASME ASCE IEEE ACM MAA MIS STM Springer Link J gate EDSCO PROWSE Bio Pharama Geo Technical
	CDS and VCDs	10060
	International open access Journals	ALL

The University has improved its infrastructure facilities like lecture halls, auditoriums, guest house and video-conferencing which have become world class. The University has upgraded its library facilities and several additional e-journals and e-books are now available. New research block beside Mechanical Engineering block has been started, new block for Central Library and Professor Centric Laboratories have become operational this year.

## Student Support and Progression

The Dean Student Affairs supports mentors and monitors the progression of students. Welfare measures such as scholarship, fee-waivers etc., are provided by the University in addition to government scholarships. The University takes timely redressal of student grievances and also sexual harassment. Woman security personnel are appointed to attend exclusively to the specific problems of girl students. The International Students' Cell has been established by KLEF as per the statutory norms. It caters to the requirements of foreign students pursuing academics at KLEF.



A number of capability enhancement schemes such as competitive examinations, career counselling, remedial coaching, communication and soft-skills training etc., have been meticulously designed. These efforts have resulted in 30% students progressing to higher education and 63% students to placements during the last 5 years.

KLEF believes in the maxim 'Today's youth are tomorrow's leaders'. As part of this the university promotes active participation of students in academics, research, extension and social & cultural activities. The student Council/Ordinate of KLEF has 20 students representing boys and girls. It has been hosting sports, technical and cultural fests annually. Student representatives are made members of various bodies, committees and councils of the university, such as DDC, DAC, Library Committee, Canteen Committee, Academic Council etc.

KLEF has an active Alumni Association with 6 chapters across India and 1 in USA. The Alumni Association meets twice-in-a-year and contribute to academic matters, mobilize resources both by financial and nonfinancial means.

## ACHIEVEMENTS IN GAMES AND SPORTS

Our University is committed to making the students' educational experience multifaceted and holistic. This commitment is very evident with world class sports facilities, holding sports meets, and encouraging and facilitating student participation in national and international level competitions.

I am very proved to announce that our student Ms Jyothi surekha has won the prestigious ARJUN AWARD by the GOI for her outstanding talent in archery. The award was given by the Hon`ble President Sri Ram Nath Kovind at New Delhi Rastrapathi Bhavan on 29th August 2017. The ,Chief Minister of Andhra Pradesh Sri Nara Chandhra babu Naidu garu offered cash prize, Land and Govt. Job in state government. Further to add during this year our students won 12 international, 58 national and 101 state level awards in various Tournaments in different Games & Sports. Some of the details are presented here under.

Sl. No.	Name of the Student	Event	Level	Place	Date & Venue
1	V.Jyothi Surekha	Archery(Compound Team Event )	International	2nd Place	49th World Championship in Archery held at Mexico City from 15th to 22nd October 2017
2	V.Jyothi Surekha	Archery Women Team Event	International	1st Place	Asian Archery championship held at Dhaka, Bangladesh from November 25th to 30th 2017
		Archery ( Individual)	International	2nd Place	
		Archery (compound Mixed Team)	International	3rd Place	

3	Teja Suresh Merugu	Chess	International	41st rank	Peoples Tournament , Berkeley,California USA from 14th July to 16th July 2017
4	V. Jyothi Surekha	Archery	International	Gold Medal (Mixed team) Silver Medal (Women team)	Asia Cup Archery World Ranking Tournament Stage - 2 held at China, Taipei from 7th Sept to 17th Sept 2016
5	P. Satya Nikhit	Karate	International	Gold	All Styles Invitational International Karate Championships - 2017 from 3rd to 5th feb at Rajiv gandhi Indoor stadium ,Vishakapatnam,AP
6	M. Teja Suresh	Chess	International	1st Place	Pleasanton SuperSwiss held at Pleasanton,California, USA on 04th June 2016
7	M. Teja Suresh	Chess	International	10th Place	25th Annual Chicago Open held at Wheeling, Illinois, USA from 26th May to 30th May 2016
8	M. Teja Suresh	Chess	International	13th Place	BAC Summer Championship held at Milpitas, California, USA from 24th June to 26th June 2016
9	Stanlaus Adam	Basket Ball	International	2nd Place - Single	International Chekker Board -16 hosted by Vignan University on 7th & 8th Oct 2016
10	V.Jyothi Surekha	Archery	National Level	Arjuna Award	<b>Received by Hon`ble President Sri Ramnath Kovind at New Delhi Rastrapathi Bhavan on 29th August 2017.</b>
11	Jetti Naveen Kumar	Karate	National Level	1st Place	South India Level Karate Championship held at Chennai on 28th January 2018.

12	P. Sonika Sai	Badminton	National (Under 19 years) Doubles Girls	3rd Place	All India Junior Ranking Badminton Tournament - 2016 (Boys & Girls U-17 & 19 Yrs) held at Hyderabad from 19th to 24th July 2016
13	P. Sonika Sai	Badminton	National (Under 19 years) Mixed Doubles	3rd Place	All India Junior Ranking Badminton Tournament - 2016 (Boys & Girls U-17 & 19 Yrs) Tirupati from 21th to 27th August 2016. (Chittor District Badminton Association)
14	P. Sonika Sai	Badminton	National (Under 19 years) Doubles All India	3rd Place	All India Junior Ranking Badminton Tournament - 2016 (Boys & Girls U-17 & 19 Yrs) Hyderabad from 21st to 27th August 2016.
15	P. Sonika Sai	Badminton		2nd Place	All India Junior Ranking Badminton Tournament – 2016 held at Ludlow Castle Sports Complex, Delhi from 12 <sup>th</sup> to 18 <sup>th</sup> September 2016
16	P.Sonika Sai	Badminton/ Mixed Team	National	1st Place	41 Inter State & inter Zonal Junior National Championship 2016Indoor stadium Ajjarakad, Udipi Karnataka from11 to 17 December 2016
17	V. Jyothi Surekha	Archery	National	Gold (Compound Round -50Mtr- II)	All India Inter University Archery Tournament, Held at Kirshna University Machlipatnam From 15th to 19 Feb 2017
18	V. Jyothi Surekha	Archery	National	Gold (Compound Round -50Mtr-I and Over all)	All India Inter University Archery Tournament, Held at Kirshna University Machlipatnam From 15th to 19 Feb 2017
19	J Naveen Kumar	Karate (Black belt)	National (South India)	1st Place	South Open Karate Championship Held at NTR Municipal Indoor Stadium Guntur AP on 9th April 2017

## **Governance and Leadership**

KLEF has created a well-defined transparent organizational structure with participative management through decentralization. The structure of Governance facilitates transparency in hierarchy, decision making and implementation of programs policies and practices. The Academic, Executive, Research, IQAC and Administrative wings of Governance have well-designed structure supported by a number of committees, forums and governing bodies. The existing governance helped in establishing clear-cut policies, practices and outcomes as part of perspective planning based on which strategy development and deployment process are initiated.

The governance structure supports a culture of involving members of faculty at all levels of decision-making and implementation. Thus the various levels of good governance provide scope for participative and productive involvement of various key stakeholders of the institution.

Academic Staff College is established for competency enhancement of Faculty and Staff through professional development programs. Faculty are provided with financial support for professional body memberships and to attend conferences. A transparent self-appraisal format separately for teaching and non-teaching staff is developed. KLEF has established procedures and processes for planning allocation and optimum utilisation of financial resources. Strategies for expanding consultancy base, government grants, for mobilization of resources is developed. The university accounts are subjected to internal and external audit twice in a year. IQAC developed quality management strategies in all academic and administrative aspects. These initiatives include collection & analysing of feedback from stakeholders for Improvements, Accreditation and Certification and participation in all rankings like NIRF, AISHE etc.

## **Institutional Values and Best Practices**

KLEF core values are aligned to its mission and vision and are reflected in the curricular and professional growth of the KLEF community. Equity as its premier value and a Women's Forum as its mouthpiece, the university promotes gender sensitivity among all stakeholders. Girls are given special counselling to overcome depression, abnormal behaviour etc.,

KLEF has a well-defined Environment policy. The focus is on Renewable energy, Waste management, Rain water Harvesting and Green practices. The aim is to develop awareness of Environmental issues and sustainability. This translated into a healthy increase in reliance on Renewable energy sources.

KLEF builds a safe, healthy and sustainable environment among students, and faculty. Facilities are provided for differently-abled persons catering to their specific needs. Built in the heart of the agrarian coastal green lands, KLEF enjoys locational advantages, such as eco-friendly, pollution-free environment, that facilitates smooth knowledge transfer, and inspires intellectual and creative enterprise. Another advantage is creation of direct and indirect employment opportunities for the local unemployed youth. Lack of connectivity and lack of industries in the vicinity are major disadvantages. These are partially alleviated through extension and outreach programmes.