

# FOR 2<sup>nd</sup> CYCLE OF ACCREDITATION

# K.S. RANGASAMY COLLEGE OF TECHNOLOGY (AUTONOMOUS)

KSR KALVI NAGAR, TIRUCHENGODE, NAMAKKAL DISTRICT.
637215
www.ksrct.ac.in

#### Submitted To

# NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL BANGALORE

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### 1. EXECUTIVE SUMMARY

#### 1.1 INTRODUCTION

**K.S.Rangasamy College of Technology** is one of the leading Private Academic and Research Institutions in Tamil Nadu State of India. Establishments and achievements are long way of 27 years with marked research and innovations that caters to societal impact.

K.S.Rangasmay College of Technology, an autonomous Institution, was established in the year 1994 under the KSR Educational and Charitable Trust by Lion Dr.K.S.Rangasamy MJF, a well-known philanthropist with a motive of providing quality education to the rural community at an affordable cost. KSRCT had a humble beginning with 4 UG departments and at present it offers 12 UG departments, 9 PG departments and 8 potential research centres education in the areas of Engineering, Science, Technology and Management under Anna University and approved by AICTE. KSRCT is known for the stamp of quality, multi-disciplinary / diversified, quality faculty and excellent infrastructure to cater to the needs of local and global needs.

The ethos of the Institution lies impregnated with the beliefs, values, responsibility, accountability and societal welfare by inculcating all these life-enriching standards to the students along with the dissemination of education and other accompaniments to build the future of the nation empathetic values. Also, always it insists the students that science and technology shall solve the societal problems.

Six of its departments accredited by NBA with Tier 1 category, Mentor status from MoE, Accredited by NAAC twice, Recognized under Section 2(f) and 12B Status by UGC, NIRF Ranking: 99 (2017); 101-150 (2018), ARIIA Ranking 2021 (Excellent Band), DST-FIST sponsored Institution, DBT-STAR College for 4 departments (CSE, Biotechnology, Food Technology & Physics), First private engineering college to offer M.Tech. - Biotech (PG programme) through GAT-B score and sponsored by DBT.

#### Vision

To produce the most competent Scientists, Engineers, Technologists, Entrepreneurs, Managers and Researchers through quality Education

#### Mission

To achieve academic excellence in Science, Engineering, Technology, Management and Research through objective and innovative teaching methods; dedicated and duty conscious faculty; continual and consistent updating of facilities; welfare and quality improvement of the faculty and a system of continual process improvement

# 1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

#### **Institutional Strength**

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- Indigenously developed programming skill development system (digipro) to improve the coding skills, and facilitating a platform to conduct quizzes and proctored exams
- Vibrant Institution's Innovation Cell under MoE, and achievement of 4 Star Rating, ARIIA Ranking–Excellent Band and Mentor Status
- Excellent Innovative and Entrepreneurship ecosystem (Implemented Institution's Start-Up Policy and NISP)
- Well-equipped library and its NDLI club & Readers' Club kindles reading habits and organizes many useful activities to foster students' personality development
- Centres of Excellence (CoEs) with Augusta, Aspire Systems, Automation Anywhere University, Autodesk, Enthu Technolgies, DELLEMC, ICT Academy, Oracle, National Instruments, Sertal Automation, PTC, Virtusa, UI Path, Wipro, etc., for the skill development, internships, and placement.
- Green and eco-friendly Campus with renewal energy generation and received district green champion award from MGNCRE.
- Best use of autonomy from 2007, to have better curricula which meet the local and global needs, and the implementation of Choice Based Credit System.
- 6 UG departments with NBA Tier 1 Accreditation
- Separate cell for R & D and IPR to augment the research activities and funding proposals
- DST-FIST sponsored Institution
- DBT-STAR College Scheme
- DBT sponsored PG programme M.Tech. (Biotechnology) First private Engineering College to offer through GAT-B
- AICTE-IDEA Lab worth 1.34 Crores, one among 49 colleges in India
- AICTE's LITE programme to offer minor degree, one among 50 colleges in the country
- Recipient of New Code of Education Award (Runner) 2021 for top performing autonomous Institution across country
- NSS/YRC/RRC to inculcate social responsibility attitude among students
- Sports activities and cultural activities shows that students have all round capability. One of our students, Mr.Rajkumar, MBA was selected to play for TNPL Madurai Panthers
- Conducive environment for women and ragging-free Campus
- Best ecosystem for writing research proposal, publications and IPR. Till date Rs.23.3 Crore Grant-in-Aid received from various funding agencies to carryout research projects and to organize conferences, workshops, seminars, etc., 1755 articles published in Scopus Indexed journals. H-Index of the Institution as per Scopus is 56, Google Scholar is 65 and Google i10 index is 483

#### **Institutional Weakness**

- Students hail from rural background and hence their exposure to new technologies and developments is harder
- Institution is located remotely and accessibility to industries hub become difficult
- Limited admissions from other states
- Limited international collaborations and activities

#### **Institutional Opportunity**

- Opportunity to attract students from across the nation and abroad
- More collaborations with foreign universities and IITs in teaching and research are to be exploited

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- Focus on establishing Incubation, EDC infrastructure, and centres of excellence in thrust areas
- Tapping the alumni resources for undertaking industry relevant projects and improving employability of students
- Industry collaboration for consultancy activities and case studies
- Align with SDGs and focus towards Atmanirbhar Bharat / Self-reliant India process
- Chances of inking of MoUs with nearby companies on products and services
- Increasing trends in the enrolment of students in internships
- Enormous potential to apply for patents on new products and copyrights on services/ideas.

#### **Institutional Challenge**

- Reduction in the admission of creamy layer of students to the programmes.
- Entry of foreign and private universities
- More industry-oriented research problems to be undertaken
- Attracting more consultancy services for the resource generation.
- Tie up with more industries for enhancing consultancy activities and collaboration
- Less number of admissions to postgraduate programmes
- Augment job / employment opportunities in core companies
- Management of students and ensuring their focus on online education in the face of pandemic
- Lack of peer group learning and academic socialization in the pandemic period

#### 1.3 CRITERIA WISE SUMMARY

#### **Curricular Aspects**

#### **Structure of curriculum development:**

The Curriculum design and implementation associated with the academic flexibility, enrichment and feedback system at K.S.Rangasamy College of Technology (KSRCT) is described in this section. The curricula and syllabi are mainly focus on local, national, regional and global development. The Choice Based Credit System (CBCS) is implemented in all the UG and PG programmes in this Institution from 2014 onwards. The POs, PSOs and COs are formulated for all programmes focusing towards employability and research-oriented courses for knowledge enrichment. The curriculum is designed and implemented based on the AICTE guidelines and feedback received from the various stakeholders.

#### Feedback Mechanism at KSRCT:

The stakeholders like students, members of faculty, alumni and employers are collected and analyzed through online. Based on the feedback analysis, the revision of syllabus is carried out in all the programmes offered in the Institution on par with developments in the respective domains. Course wise periodic student feedback is collected and analyzed through online for faculty evaluation and the report is communicated to the respective faculty members, so that assess themselves to improve and contribute to teaching learning process in a positive way.

#### Focus on employability/entrepreneurship/ skill development

All the courses in the curricula have mainly focusing on employability, entrepreneurship and skill development. The Skill development initiatives finds a new significance and focus on the National Education Policy (NEP 2020) by the Government of India, and paves the way for building a strong and progressive nation. Also, the institution incorporates the courses relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability. Nearly 80% of new courses have been introduced across all programmes during the last five academic years. The Institution is also offering life skill based value added courses for all the programmes. For In-plant training/Internships there is a provision to earn additional credits and interdisciplinary open elective courses are also offered.

#### **Teaching-learning and Evaluation**

Indian classroom is a typical mixture of students with varied ability. Basically, they differ from each other in terms of cognitive development and in their articulation of understanding the concepts taught.

KSRCT assesses the learning levels of the students individually. Overall as well as course wise assessments are being done. Advanced learners provided support to participate in various events Hackathons, International/National/State level project competitions, Fellowships, undergo fast track completion of courses in seventh semester enabling full time project internship in companies and work in current technologies like AI, Data analytics, IoT, Green Energy and Automation. Slow learners are identified course wise and provided coaching by the concerned faculty and their improvements are followed up.

The gaps between the teaching learning process and the expected outcomes are identified and accordingly, various student-centric methods are proposed to increase the participation of the students in the learning process. Experiential Learning, Participative Learning and Problem Solving Methodologies are being implemented for all courses based on the nature of the course.

Academic calendar is prepared and circulated before the commencement of classes in the beginning every year. This contains the annual working days, schedule of all curricular activities including continuous assessments and end semester examinations. The planning for lecture delivery is done based on the academic calendar and faculty prepare the lesson plans hence forth.

Six UG programmes are accredited by NBA under Tier I category and Outcome Based Education (OBE) is being followed in the departments. Learning outcomes help the faculty as well as the students to know about the objectives and outcomes of the programmes. The knowledge level questions are provided in the question papers. Program Assessment Committee meetings and Department Advisory Board meetings provide suggestions for further actions in the teaching-learning process for the attainment of COs.

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Students are assessed by Continuous internal assessment and Semester End Examinations. Software (CTCMS) is developed and maintained by in-house faculty team. Quiz and computer program related subjects are mostly evaluated through the software, DigiPro – a learning assessment system developed by in-house faculty team of KSRCT.

#### Research, Innovations and Extension

KSRCT aims to share knowledge through quality education, research and innovation. To achieve this goal, the Institution seeks to strengthen research and innovation activities by motivating members of faculty and students in their desired path of research and career. A notable number of members of faculty are on the verge of obtaining their Ph.D. degrees meeting the simultaneous aspirations of teaching. Even students are also given opportunities to apply for the research proposals for different funding agencies.

Members of faculty are motivated and rendered financial support to apply for Research Grants/Infrastructure to various funding agencies of both Government and Non-Government Organizations. The Institution facilitates the faculty in preparing an effective funding project proposals and budget, which are constructive and valuable for the upcoming generation to meet out their needs.

KSRCT received 67 funded research projects amounting to Rs. 811.28 lakhs from various funding agencies like DST, AICTE, SERB, DBT, DST, TNSCST, CSIR, etc., so far. The Institution generated Rs.44.089 lakhs through consultancy works. At the outset, around 678 publications have been made by the members of faculty in reputed international and national journals with good impact factors during the assessment period. As on date, Google scholars citation as 21900, h-index 65, Scopus citation as 17348, h-index 56, Web of Science citation as 11508, h-index 51. To motivate and support to develop novel and useful innovative products from facilities available and students for the patents, copyrights, design rights and other related intellectual property rights. Patent filing charges borne by the Institution provided, if the faculty members file their patent on the name of the Institution. 06 patents and 7 copy rights have been published in the assessment period

#### **Infrastructure and Learning Resources**

KSRCT Campus is located in a sprawling 28.085 acres of lush green **Campus with built up area** of 1,22,893.75 sq m. To strengthen an effective teaching-learning environment, the Campus is equipped with 58 class rooms with ICT facilities, LCD projectors, WIFI-LAN, PA system, including 13 smart classrooms with multimedia facility, 22 tutorial rooms, & 7 seminar Halls with ICT facility, 109 laboratories and one auditorium with 900 seating capacity. Centres of excellences and industry supported laboratories have been set up. The Institution has Institution's Innovation Council (IIC) supported by Ministry of Education to promote innovation, start-up and entrepreneurial ecosystem. The Campus Training and Placement Cell imparts soft skill and technical training to the students. There are three hostels with an overall capacity of 1600. The Institution offers ample facilities for conducting all kinds of sports and cultural activities. The average percentage of expenditure on infrastructure augmentation excluding salary during the last five years is 40.32.

The Central Library is located with an area of 1500 sq.m. fully automated using In-house Library Management System. Sufficient numbers of systems are available in the Digital Library Section with Internet access facility to access the e-resources. The Institution allocates funds towards the purchase of books/e-books and

subscriptions to journals/e-journals. The daily usage of the library by staff and students exceeds 25%.

The Institution has 1420 computer systems in the ratio of 2:1with 22 higher end servers. The Institution is fortified by Gajshield firewall to achieve campus network security. The Institution has high capacity Wi-Fi facility through various access points in the Campus with concurrent access speed of 160 Mega Bytes per Second for the faculty and students' utility. The Institution provides online mode of teaching and learning process through Microsoft Teams Platform. The examination for program oriented subject is fully automated with DigiPro application.

The maintenance of physical, academic and support facilities are carried out by the respective departments with the help of the estate officer /housekeeping staff on daily basis and periodically with an average percentage of expenditure of 59.68 excluding salary component during the last five years.

#### **Student Support and Progression**

Students are the primary stakeholders of the Institution, who has been devising measures like student empowerment, inclusive practices and skill development that student supportive and student-centric.

The Institution ensures the prompt application schedule and payment of SC/ST/BC/MBC scholarships provided by the State Government and the Government of India. The socio-economically weaker sections and differently-abled students are encouraged with financial assistance through fee concessions and scholarships. Also, the Institution offers merit scholarships for the meritorious students. In addition to this, scholarships offered by NGOs are also liaised by the Institution.

The Institution has offered many programmes in Soft skills, Language and Communication Skills, Life skills and Awareness of Trends in Technology. The Institution also offers coaching for GATE and other examinations every year and many programmes towards career counselling has been offered.

Training and Placement Cell empowers the students on regular basis to be job-ready through their intensive career development programmes. The Institution has an active Placement Cell which bridges the gap between the students and the suitable employment opportunities awaiting them.

Cultural Committee and Sports Committee cater to their personal values like leadership, comradeship, sportsmanship and celebration of togetherness. Several co–curricular, extra–curricular and sports activities are being conducted to facilitate holistic development of the students personality and emerge as a socially matured individual.

The Internal Complaint Cell and the Anti-Sexual Harassment Cell are vigilant in sensing gender menaces in any form and are quick to adopt practical measures in gender sensitization and abolishment of sexual harassment. The Anti-Ragging Committee that ensures a ragging-free campus and this committee directly take up issues and look for a speedy resolution of the same.

The Institution has an active Alumni Association Cell and the main objective of the Association is to bridge the gap between the Institution and the alumni. The alumni contribute both financial and non-financial support to the Institution. The alumni actively involved in various events either as resource persons, judges or facilitators for extra-curricular activities. The alumni chapter recently opened in Chennai, Bangalore, Kerala and the USA and constituted the distinguished alumnus to recognize the contribution to the alumni association.

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#### Governance, Leadership and Management

KSRCT is one of the silver jubilee seen autonomous Engineering Colleges in the State of Tamil Nadu, India, established in 1994 affiliated to Anna University, Chennai approved by UGC & AICTE. The KSR Educational & Charitable Trust was founded in 1984 by Lion Dr. K. S. Rangasamy, a well-known philanthropist. who hails from an agricultural family. In addition to agriculture, he started doing business in distributing milk to societies. In due course, he concentrated on the textile business and developed KSR Textile Mills Pvt. Ltd, KSR exports and a fleet of the power looms He has dedicated his life to the noble cause of education.

The Principal is the head of both the academic and administrative domains, who is empowered by the Management and Governing Council (GC), to plan, execute and review the operational part of the affairs of all domains. The Institution has a strong system for representing authority at all layers of the institutional chain of command.

The Institution has a long term strategic perspective plan as well as an Annual Strategic Perspective Plan for continuous improvement and to progress ahead towards the realization of its Vision, Mission and core values.

The Institution has constituted various development cells with an objective to promote faculty vitality which is the main ingredient for any institutions' growth, enhancing professional education and competence. Average percentage of teachers were provided with financial support to attend conferences / workshops and towards membership fee of professional bodies.

IQAC conducts internal and external financial audits regularly. Enriching the faculty vitality in key domains of teaching, assessment, research, professionalism, and administration is perceived to improve the educational environment significantly and enhances the academic performance of learners to strengthen KSRCT.

#### **Institutional Values and Best Practices**

Institutional Values and Best Practices of K. S. Rangasamy College of Technology strengthen the Institutional activities towards erudite teaching-learning environment, digital training, placement and assessment methodology. The Institution has conducted gender equity programmes under Women Empowerment Cell with pre-action plan on every year to provide safety and security to the girl students and ensure that girl students are counseled by a trained external mentor.

The Institution has the best possible steps for managing solid wastes, liquid wastes, bio medical wastes and E-wastes in-line with Green Campus Policy. The practices adopted to maintain waste-management are eco-friendly, economically sustainable and as per regulatory norms. The Institution takes all the necessary measures to conserve rainwater in the best possible ways.

The Institution has taken initiatives and practices for alternatives for plastic usage. The use of plastics is prohibited strictly in the Campus to make clean and reduce the impact on environment. The Institution initiates energy conservation measures like solar energy, automatic light controller, automatic water level controller, automatic power factor controller, and use of LED bulbs and equipment used for power efficiency.

The Institution has provision for providing lift facility, ramp facility, washroom facility and scribes for examination and counseling facility for the differently abled persons.

It even enlightens students by organizing awareness programmes workshops, training programmes regarding the importance of eco-friendly environment, health awareness campaigns, skill development programmes etc., are organized to contribute the local community.

KSRCT has a specific Code of Conduct for the stakeholders who are part and parcel of the Institution which offers course on Universal Human Values, Constitution of India and Professional Ethics to technical graduates as part of the curricula.

the Institution is functioning as per the professional code prescribed and suggested by statutory bodies. Various Committees prescribed by the Governing Body, exercise their responsibilities in the Institution as a whole. The Institution has best practices to ensure overall development and promote a healthy research environment, placements and innovation.

# 2. PROFILE

## 2.1 BASIC INFORMATION

Name and Address of the College		
Name	K.S. RANGASAMY COLLEGE OF TECHNOLOGY (AUTONOMOUS)	
Address	KSR Kalvi Nagar, Tiruchengode, Namakkal District.	
City	Namakkal	
State	Tamil Nadu	
Pin	637215	
Website	www.ksrct.ac.in	

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal	R. Gopalakris hnan	04288-274748	9994150505	04288-27474 5	principal@ksrct.ac.
IQAC / CIQA coordinator	P. Premkumar	04288-274742	9790666007	04288-27474 1	iqac@ksrct.ac.in

Status of the Institution	
Institution Status	Self Financing

Type of Institution	
By Gender	Co-education
By Shift	Regular

Recognized Minority institution		
If it is a recognized minroity institution	No	

<b>Establishment Details</b>	
Date of Establishment, Prior to the Grant of	01-01-1994

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'Autonomy'	
Date of grant of 'Autonomy' to the College by UGC	19-06-2014

University to which the college is affiliated				
State University name Document				
Tamil Nadu	Anna University	View Document		

Details of UGC recognition				
<b>Under Section</b>	Date	View Document		
2f of UGC	20-06-2006	<u>View Document</u>		
12B of UGC	15-12-2011	View Document		

Details of recognition/approval by stationary/regulatory bodies like AICTE,NCTE,MCI,DCI,PCI,RCI etc(other than UGC)				
Statutory Regulatory Authority	Recognition/App roval details Inst itution/Departme nt programme	Day,Month and year(dd-mm- yyyy)	Validity in months	Remarks
AICTE	View Document	03-07-2021	12	
AICTE	View Document	03-07-2021	12	

Recognitions		
Is the College recognized by UGC as a College with Potential for Excellence(CPE)?	No	
Is the College recognized for its performance by any other governmental agency?	Yes	
If yes, name of the agency	National Board of Accreditation	
Date of recognition	07-12-2019	

Location and Area of Campus				
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.
Main campus area	KSR Kalvi Nagar, Tiruchengode, Namakkal District.	Rural	28.085	113692

# 2.2 ACADEMIC INFORMATION

Details of Pro	ogrammes Offe	red by the Col	lege (Give Data	a for Current	Academic year	)
Programme Level	Name of Pr ogramme/C ourse	Duration in Months	Entry Qualificatio n	Medium of Instruction	Sanctioned Strength	No.of Students Admitted
UG	BE,Mechatro nics	48	HSC or DIPLOMA	English	60	45
UG	BE,Civil Engineering	48	HSC or DIPLOMA	English	30	21
UG	BE,Compute r Science And Engineering	48	HSC or DIPLOMA	English	120	120
UG	BE,Electrical And Electronics Engineering	48	HSC or DIPLOMA	English	60	54
UG	BE,Electroni cs And Com munication Engineering	48	HSC or DIPLOMA	English	120	120
UG	BE,Mechani cal Engineering	48	HSC or DIPLOMA	English	90	50
UG	BTech,Biote chnology	48	HSC or DIPLOMA	English	60	57
UG	BTech,Textil e Technology	48	HSC or DIPLOMA	English	60	47
UG	BTech,Food Technology	48	HSC or DIPLOMA	English	60	39

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UG	BTech,Infor mation Technology	48	HSC or DIPLOMA	English	120	120
UG	BTech,Comp uter Science And Business Systems	48	HSC or DIPLOMA	English	60	60
UG	BTech,Artificial Intelligence And Data Science	48	HSC or DIPLOMA	English	60	60
PG	Mtech,Nano Science And Technology	24	UG	English	6	6
PG	ME,Comput er Science And Engineering	24	UG	English	6	6
PG	Mtech,Biote chnology	24	UG	English	18	17
PG	MBA,Master Of Business Administrati on	24	UG	English	60	60
PG	ME,Vlsi Design	24	UG	English	6	6
PG	ME,Engineer ing Design	24	UG	English	6	5
PG	ME,Structur al Engineering	24	UG	English	6	6
PG	ME,Industria 1 Safety Engineering	24	UG	English	18	18
PG	ME,Power System Engineering	24	UG	English	6	3
Doctoral	PhD or DPhi	36	PG	English	1	0

(Ph.D)	1,Chemistry					
Doctoral (Ph.D)	PhD or DPhil,Ece	36	PG	English	2	2
Doctoral (Ph.D)	PhD or DPhil,Eee	36	PG	English	2	2
Doctoral (Ph.D)	PhD or DPhil,Bio Technology	36	PG	English	1	0
Doctoral (Ph.D)	PhD or DPhi 1,Mechatroni cs	36	PG	English	1	0
Doctoral (Ph.D)	PhD or DPhi 1,Computer Science And Engineering	36	PG	English	5	5
Doctoral (Ph.D)	PhD or DPhi 1,Mechanical Engineering	36	PG	English	1	0
Doctoral (Ph.D)	PhD or DPhil,Master Of Business Administrati on	36	PG	English	1	0

Position Details of Faculty & Staff in the College

	Teaching Faculty											
	Profe	Professor			Asso	Associate Professor			Assis	Assistant Professor		
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				0				0				0
Recruited	0	0	0	0	0	0	0	0	0	0	0	0
Yet to Recruit				0				0				0
Sanctioned by the Management/Soci ety or Other Authorized Bodies				73				63	J			188
Recruited	49	24	0	73	41	22	0	63	115	73	0	188
Yet to Recruit		'		0		1		0				0

	Non-Teaching Staff							
	Male	Female	Others	Total				
Sanctioned by the UGC /University State Government	7			0				
Recruited	0	0	0	0				
Yet to Recruit				0				
Sanctioned by the Management/Society or Other Authorized Bodies				81				
Recruited	38	43	0	81				
Yet to Recruit				0				

Technical Staff							
	Male	Female	Others	Total			
Sanctioned by the UGC /University State Government				0			
Recruited	0	0	0	0			
Yet to Recruit				0			
Sanctioned by the Management/Society or Other Authorized Bodies				88			
Recruited	46	42	0	88			
Yet to Recruit				0			

# **Qualification Details of the Teaching Staff**

	Permanent Teachers									
Highest Qualificatio n	Professor		Associate Professor			Assistant Professor				
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/ LLD/DM/M CH	0	0	0	0	0	0	0	0	0	0
Ph.D.	49	24	0	20	13	0	16	3	0	125
M.Phil.	0	0	0	6	0	0	8	12	0	26
PG	0	0	0	15	9	0	91	58	0	173
UG	0	0	0	0	0	0	0	0	0	0

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	Temporary Teachers										
Highest Qualificatio n	Professor		Associate Professor			Assistant Professor					
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total	
D.sc/D.Litt/ LLD/DM/M CH	0	0	0	0	0	0	0	0	0	0	
Ph.D.	0	0	0	0	0	0	0	0	0	0	
M.Phil.	0	0	0	0	0	0	0	0	0	0	
PG	0	0	0	0	0	0	0	0	0	0	
UG	0	0	0	0	0	0	0	0	0	0	

	Part Time Teachers									
Highest Qualificatio n	Professor		Associate Professor			Assistant Professor				
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/ LLD/DM/M CH	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0
UG	0	0	0	0	0	0	0	0	0	0

Details of Visting/Guest Faculties						
Number of Visiting/Guest Faculty	Male	Female	Others	Total		
engaged with the college?	0	0	0	0		

Provide the Following Details of Students Enrolled in the College During the Current Academic Year

Programme		From the State Where College is Located	From Other States of India	NRI Students	Foreign Students	Total
UG	Male	818	3	0	0	821
	Female	220	1	0	0	221
	Others	0	0	0	0	0
PG	Male	84	6	0	0	90
	Female	35	2	0	0	37
	Others	0	0	0	0	0
Doctoral (Ph.D)	Male	0	0	0	0	0
	Female	0	0	0	0	0
	Others	0	0	0	0	0

#### Provide the Following Details of Students admitted to the College During the last four Academic Years **Programme** Year 1 Year 2 Year 3 Year 4 SCMale Female Others STMale Female Others OBC Male Female Others General Male Female Others Others Male Female Others

### 2.3 EVALUATIVE REPORT OF THE DEPARTMENTS

Total

Department Name	Upload Report
Artificial Intelligence And Data Science	View Document
Biotechnology	View Document
Bio Technology	View Document
Chemistry	View Document
Civil Engineering	View Document
Computer Science And Business Systems	View Document
Computer Science And Engineering	View Document
Ece	View Document
Eee	View Document
Electrical And Electronics Engineering	<u>View Document</u>
Electronics And Communication Engineering	<u>View Document</u>
Engineering Design	View Document
Food Technology	View Document
Industrial Safety Engineering	View Document
Information Technology	View Document
Master Of Business Administration	View Document
Mechanical Engineering	<u>View Document</u>
Mechatronics	View Document
Nano Science And Technology	View Document
Power System Engineering	View Document
Structural Engineering	View Document
Textile Technology	View Document
Vlsi Design	View Document

# Institutional preparedness for NEP

1. Multidisciplinary/interdisciplinary:	In K.S.Rangasamy College of Technology, the multidisciplinary education is offered to the students in order to enhance the interdisciplinary skills by learning courses offered by other disciplines.
	Multidisciplinary education to the students in the

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Institution is offered through Choice Based Credit System (CBCS). Under CBCS, the students have flexibility in learning courses offered by other disciplines. Hence, the students are given the provision to add extra courses during a semester on need basis. The list elective courses offered by other disciplines are offered as open electives where students from any discipline can learn and credits earned by the students are accounted for the award of degree. Students are permitted to learn online courses offered through NPTEL, SWAYAM, Coursera, Udemy, etc, and the credits waiving is permitted to students. Additional skill enhancement courses are offered to students with industry expert in order to empower the industry readiness among the students. Students are also permitted to attend industry internship and industrial training to have practical exposure in order to improve the employability skills. The curricula offered by the Institution is designed with diverse perspectives of cross cutting issues such as professional ethics, human values, and life skills. Hence, the multidisciplinary in learning promotes the flexibility in learning enabling lifelong learning among the students. The academic curriculum with interdisciplinary enrichment enables the students to learn various course of interest and apply the knowledge and skills in the own discipline of study. The introduction courses in the curricula of R2014 and R2018 related to environment such as Waste Water Management, Environmental Science, Environmental Hazards and Management, Pollution and Its Management, etc, imparts environmental education among the students. Additionally, the value based education is offered through courses including Professional Ethics, Constitution of India and Universal Human Values are offered as mandatory courses where the students learn about the involvement and service to the community. Additionally the students are provided with sufficient awareness about various societal challenges though various outreach activities. Hence, it transforms the students into responsible citizens and also plays a vital role in development of sustainable societies in and around the surroundings of the Institution.

2. Academic bank of credits (ABC):

The mobility of students between programmes by storing and transferring the credits for the award of the degree is facilitated with the use of Academic

Bank of Credits (ABC). Hence, it supports for anytime, any-where, and any-level learning. ABC will facilitate mobility among the students and the recognition of credits earned by students across Higher Education Institutions is supported. At K.S.Rangasamy College of Technology, an awareness programme is planned to promote flexibility in curricula framework and interdisciplinary or multidisciplinary academic mobility among the students. The new regulation R2022 is proposed in the Institution for academic year 2022-23. In the proposed regulation R2022 it is planned to offer minor degree/hons. degree as per the norms of the AICTE and state university. The proposed regulation for the minor degree includes list of courses in emerging / multidisciplinary areas including Artificial Intelligence and Machine Learning, Block Chain, Cyber Security, Data Science, etc with 18-20 credits. The minor degree is to be offered to students of different discipline. Additionally, minor courses must be completed in parallel with the major degree courses. Also, after the completion of major degree, minor degree cannot be earned. AICTE had permitted to offer minor degree on Web Design. Two faculty members from CSE Department have successfully completed the Leadership in Technical Excellence (LITE) faculty training offered by AICTE during 2021 to offer minor degree. The students learning advanced courses in the same discipline with additional credits of 18-20 earns the hons. degree. The minor degree and hons. degree can be offered to the students after the approval of academic council and governing council meetings. The credits of every student are maintained in the Institution to support for the award of minor and hons. degree. The academic bank of credits ensures flexibility in learning and favors for skill upgradation in any discipline of interest in order to promote the students with industry ready. The Institution also encourages the students to learn courses offered by SWAYAM, NPTEL by providing stipends for courses registration.

3. Skill development:

The skill development initiatives finds a new importance and focus on the National Education Policy (NEP) 2020 by the Government of India, and paves the way for building a strong and progressive nation. The holistic skill development of youth from

all strides of education is the determining factor to realize the objective of 'Atmanibhar Bharat' (Selfreliant Nation). Emulating the skill-based education, new vocational and technical courses of the thrust areas are urged to be introduced to make our youth more skillful and employable. The skills can be enumerated to give additional impetus to the vocational skills carpentry, plumbing, electrical repairing, horticulture, pottery making, embroidery, and so forth. The prime objective is not only to make our youth more employable but to elevate the standard of living with entrepreneurial spirit. The target of the skill development is to reach at least 50 % of the youth acquire the vocational skills by 2025 depending on the diverse requirements of the skills pertaining to the occupation. This initiative of the government is linked with the theme of 'Vocal to Local', which enables the aspiring youth to find employment in local areas. Hence, the day is not farther when the Indian youth will not be a job seeker but a potential job giver by the skill sets that are imparted to them at different stages of education and training. At the tertiary level, students pursuing their engineering and technical courses can be motivated to be a part of the collaborative with the local trades and skill crafts jobs. This opportunity will make them skill ready to provide jobs to the needy local skilled people. Also, the skilled youth will prove to encourage the local fellow youth to become apprentices irrespective of the trades. Engineering students also have lot potentials to be tapped for catering their varied skills and technical expertise to the needs of the localized trades. Keeping in mind that by 2022, India will have the largest working-age population in the world, the impetus of garnering the skills of local youth and even non-technical graduates will master the skills-specific and sure to make our nation more self-reliant.

4. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course):

Traditional knowledge is exploration of spiritual identity in terms of knowledge, skills and practices which are developed, followed, persistent and carried on from generation to generation among the society. In K.S.Rangasamy College of Technology (KSRCT) the course named "Essence of Indian Traditional Knowledge" is offered for UG students of Regulation 2018. Apart from this, the Institution is going to propose new regulation, R2022 from the academic

year 2022-2023. In this regulation, the curricula and syllabi will be designed with more focus on the National Education Policy (NEP) 2020. This new regulation will focus on Indian knowledge system by promotion of Indian languages and culture through online courses and self learning courses. The significance of imparting traditional knowledge among the students is to provide the ancestral values to lead a meaningful life. Indian Knowledge System with the multilingual learning improves learning quality among the students. The social skills and intercultural communication can be enhanced with the use of the multilingualism. The appreciation of local languages promotes cultural awareness with the improvement of creativity and in turn provides better educational value. Hence, it is planned regulation R2022 it is to offer language electives representing courses form different languages which can be opted by the students based on the interest. Multidisciplinary Learning is promoted in the institution by offering courses focusing on cross cutting issues like constitution of India, Essence of Indian Traditional Knowledge, professional ethics, Universal Human Values. The cultural knowledge about other community results in following others cultural beliefs and behaviors enabling unity in diversity. Hence, imparting traditional knowledge reduces the habit of marginalization where the individuals are focused only towards own cultures followed in the host community. The students of this Institution are also supported with global exposure by enabling to learn courses related with tradition, culture, etc., which are offered through online as self learning courses. The sufficient infrastructure facilities are also facilitated to the students to support continuous learning about the traditional heritage. Hence, these courses support for enrichment of knowledge, awareness, expertise to be transferred from one generation to another generation across the community of the country.

5. Focus on Outcome based education (OBE):

K.S.Rangasamy College of Technology (KSRCT) is already in line with the Outcome Based Education (OBE) system. The Choice Based Credit System (CBCS) is introduced from the academic year 2014 for all the UG and PG programmes. The objective of competency based education will focus on an integration of outcomes goals in terms of specific

skills, instructional experiences to teach the outcomes and assessment process. The OBE is mainly focus on measuring student performance at different levels on the following aspects. Transparency: Focusing on results, OBE generates a transparent anticipation of the top results. Students can understand what they expect, and teachers can understand what they require to demonstrate throughout the course. Transparency is crucial as it is essential to be clear in each category, so that learners are able to advance and also to describe all the data and abilities necessary to accomplish this outcome. Flexibility: The teachers can make their classes according to the student's desires by reading clearly what needs to be done. Consequently, OBE specifies no particular instructional methodology. Teachers are having a freedom to teach any methodology of exploitation. Even, they will be able to acknowledge diversity among students by victimization lots of teaching and assessment techniques in OBE. Course instructors will facilitate students to grasp the concepts easily in any approach like study guides, group work and seminar that make possible for students learning. Analysis: In OBE, the course instructors will analyze the results of a student has accomplished and in which area they are upgraded to analyze the talent and provide individual assistance and map-reading to meet their demands. These activities will help teachers and Institution and also help teachers to monitor the development and enhancement of the student over a certain quantity and to help them accomplish their results. Involvement: Student contribution in an institution is also an essential component of OBE. Students measure exactly should attempt to learn to them, so that the basics is fully understood. Enthusiastic involvement of students permits them to think to blame for their own learning and that they will learn a lot through this individual learning.

6. Distance education/online education:

K.S.Rangasamy College of Technology has been started with an initiative for Distance Education/Online Education to support the perspectives: Technological Readiness: The strategies is planned to support at all levels of readiness in technological capacities of digital learning platform systems to provide the courses to all learners as well as in household access to mobiles, digital devices,

internet connectivity and data. Content Readiness: Accessibility for teaching and learning materials aligned with curricula that can be delivered through online platforms or used for print-based home learning. Readiness of curricular content that cover all levels and all subject domains can be delivered to all learners. Pedagogical Readiness: Preparedness of faculties to design and facilitate online distance learning or print materials based home learning and ability of parents or caretakers to facilitate effective distance learning. Online teaching and learning has emerged as an important tool for students' learning remotely. In this aspect, the Institution has already initiated online education through Impartus and Microsoft Teams, which brings conversations, content assignments together in one place. As a part of Learning Management System (LMS), Institution has indigenously developed tools/platforms for the online education. DigiPro is a web IDE which is designed, developed and maintaining by in-house faculty, which gives more efficient and effective programming skills and improvises the logical thinking ability of students. It is accessible from https://ksrctdigipro.in in both online and LAN environment. Virtual laboratory is a green initiative in this institution for reducing paperwork in the process of academic learning. Online Examination System for Engineering Subjects (OE2S) is an integral part of DigiPro allows faculty to conduct the MCQ based examination. Also, the institution's library portal https://library.ksrct.ac.in/ provides NPTEL videos, web courses, useful links and link to other reputed libraries in for effective online learning. This Institution library is a member of NDLI and DELNET for effective resource sharing. Using Lecture Capturing System (LCS) of this Institution makes it easy for anyone to record, live stream, and share video. With the help of this LCS flexible video platform that can record lectures, flip classrooms, capture student assignments, and engage faculty, students, communities, alumni, and others. This system is also enhancing the learning process and improves student achievement.

# **Extended Profile**

# 1 Program

#### 1.1

### Number of programs offered year-wise for last five years

2020-21	2019-20	2018-19	2017-18	2016-17
22	20	21	21	21

File Description	Document
Institutional data in prescribed format	<u>View Document</u>

#### 1.2

### Number of departments offering academic programmes

Response: 12

### 2 Students

#### 2.1

#### Number of students year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
2985	3205	3627	4490	5002

File Description	Document
Institutional data in prescribed format	<u>View Document</u>

#### 2.2

### Number of outgoing / final year students year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
954	966	1224	1394	1487

File Description	Document
Institutional data in prescribed format	View Document

#### 2.3

# Number of students appeared in the examination conducted by the Institution, year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
2969	3171	3594	4467	4974

File Description	Г	Document	
Institutional data in prescribed format	<u>\</u>	View Document	

#### 2.4

#### Number of revaluation applications year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
4	128	161	212	254

# 3 Teachers

#### 3.1

#### Number of courses in all programs year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
671	740	789	672	715

File Description	Document
Institutional data in prescribed format	View Document

#### 3.2

#### Number of full time teachers year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
337	313	391	432	432

File Description	Document
Institutional data in prescribed format	<u>View Document</u>

#### 3.3

#### Number of sanctioned posts year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
337	313	391	432	432

File Description	Document
Institutional data in prescribed format	View Document

### 4 Institution

#### 4.1

Number of eligible applications received for admissions to all the programs year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
1858	1796	1863	2318	2416

File Description	Document
Institutional data in prescribed format	<u>View Document</u>

#### 4.2

Number of seats earmarked for reserved category as per GOI/State Govt rule year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
738	726	954	954	954

File Description	Document
Institutional data in prescribed format	<u>View Document</u>

#### 4.3

Total number of classrooms and seminar halls

Response: 105

Total number of computers in the campus for academic purpose

Response: 1420

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#### 4.4

4.5

Total Expenditure excluding salary year-wise during last five years ( INR in Lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
519.43	668.15	796.62	931.16	992.21



# 4. Quality Indicator Framework(QIF)

## **Criterion 1 - Curricular Aspects**

#### 1.1 Curriculum Design and Development

1.1.1 Curricula developed and implemented have relevance to the local, national, regional and global developmental needs which is reflected in Programme outcomes (POs), Programme Specific Outcomes(PSOs) and Course Outcomes(COs) of the Programmes offered by the Institution.

#### **Response:**

**K.S. Rangasamy College of Technology (KSRCT)** is located in rural part of the State and it was established with a noble vision of transparent and fair process to impart quality education to rural students from their budding stages to perform efficiently in the emerging globalism and contribute to national development. In the growth phase, curricula focused on learners aspirations for knowledge and skill acquisition aligned with institutional objectives and goals are prepared and updated periodically with the stakeholders feedback like faculties, industries, alumni, students and experts from various institutions and reputed R&D organizations.

**Curriculum Design Process at KSRCT:** Effective curricula and syllabi is designed in Board of Studies (BoS) meeting conducted in every semester based on the guidelines of UGC, AICTE, affiliated university and feedback from various stakeholders. Standing committee on academic council deliberates on the curricula and syllabi suggested by members to present at academic council meeting. The academic council, on deliberation, recommends modifications and suggestions for the implementation.

The curricula and syllabi are revised at regular intervals based on the upcoming needs and latest trends, and accordingly named as regulations. The average percentage of syllabus revision from R2014 to R2018 is 58.6%. The curricula of all the programmes is framed and updated regularly by focusing on employability as the students are from rural background and first graduates. The academic flexibility of the Institution supports for the introduction of new courses based on the industrial needs from stake holder feedback. Hence, the curricula is designed based on the current trends of the local industries in the surrounding region of the institute supporting Industry 4.0 including cyber-physical systems like textile, poultry, agriculture and mechanical industries satisfying national and global needs.

The Choice Based Credit System (CBCS) supplements the industry requirement and to develop specific skill sets. One credit courses and open electives are offered with industry experts are introduced from the academic year 2014. Open elective courses, industry supported internships, audit courses such as Research Skill Development I & II and Research Ethics are offered as mandatory courses in R2018. The students can choose open elective courses offered by various departments to support collaborative learning. The holistic development of students are promoted through courses like NCC, NSS and various clubs activities through NDLI, department association and extension programmes. Also, the students are allowed to take online courses and self-study courses through NMEICT, SWAYAM NPTEL, ICT Academy Learnathon and Udemy.

To enhance the employability, aptitude, soft and life skills are offered through courses such as Career Competency Development (CCD), Universal Human Values (UHV). Entrepreneurship skills are imparted to students through mandatory courses, Innovation and Start-ups, IDEA Lab. The curricula is enriched with

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mini projects, lab integrated courses, industry supported value added courses and certification courses without credits. Programming for Skill Development System (PSDS) /DigiPro tool is used to enhance the programming skill among the students for career enrichment. Apart from the above through industry connect many centres of excellences is been implemented for the technical skill development of the students and faculty.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document

#### 1.1.2 Percentage of Programmes where syllabus revision was carried out during the last five years.

Response: 100

#### 1.1.2.1 Number of all Programmes offered by the institution during the last five years.

Response: 105

# 1.1.2.2 How many Programmes were revised out of total number of Programmes offered during the last five years

Response: 105

File Description	Document	
Minutes of relevant Academic Council/BOS meeting	View Document	
Details of program syllabus revision in last 5 years(Data Template)	View Document	
Any additional information	<u>View Document</u>	
Link for Additional Information	View Document	

# 1.1.3 Average percentage of courses having focus on employability/ entrepreneurship/ skill development offered by the institution during the last five years

Response: 100

# 1.1.3.1 Number of courses having focus on employability/ entrepreneurship/ skill development yearwise during the last five years..

2020-21	2019-20	2018-19	2017-18	2016-17
671	740	789	672	715

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File Description	Document
Programme / Curriculum/ Syllabus of the courses	View Document
MoU's with relevant organizations for these courses, if any	View Document
Minutes of the Boards of Studies/ Academic Council meetings with approvals for these courses	View Document
Average percentage of courses having focus on employability/ entrepreneurship(Data Template)	View Document
Any additional information	<u>View Document</u>
Link for Additional Information	View Document

### 1.2 Academic Flexibility

1.2.1 Percentage of new courses introduced of the total number of courses across all programs offered during the last five years.

Response: 65.37

1.2.1.1 How many new courses are introduced within the last five years

Response: 2433

1.2.1.2 Number of courses offered by the institution across all programmes during the last five years.

Response: 3722

File Description	Document
Minutes of relevant Academic Council/BOS meetings	View Document
Institutional data in prescribed format	View Document
Any additional information	View Document
Link for Additional Information	View Document

1.2.2 Percentage of Programmes in which Choice Based Credit System (CBCS) / elective course system has been implemented (Data for the latest completed academic year).

Response: 100

1.2.2.1 Number of Programmes in which CBCS / Elective course system implemented.

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Response: 22		
File Description	Document	
Minutes of relevant Academic Council/BOS meetings	View Document	
Institutional data in prescribed format	View Document	
Any additional information	View Document	
Link for Additional Information	View Document	

#### 1.3 Curriculum Enrichment

# 1.3.1 Institution integrates crosscutting issues relevant to Professional Ethics ,Gender, Human Values ,Environment and Sustainability into the Curriculum

#### **Response:**

The curricula of the Institution gives high importance not only for the technical aspects, also for life skills and sustainability which addresses the environment related and energy related issues. The curricula pertaining to life skills which addresses professional ethics, gender, Universal Human Values (UHV) are offered are known as cross cutting issues.

The main objective of professional ethics and UHV in engineering programme is to impart ethical principles and responsibilities such as characteristics of morals, how to interact with others, rules and standards followed by the engineers in their roles as professionals and codes of ethics. Gender related issues are addressed through awareness programmes by Women Empowerment Cell. Social aspects of engineering and engineering graduate attributes are disseminated to all students. UHV course has been introduced in the curriculum to develop a holistic perception for self-exploration among themselves and also with family members. Necessary training has been given and arranged to the faculty who handles these courses.

The various student clubs like Institution Innovation Cell (IIC), Entrepreneurship Development Cell (EDC), Swachh Bharat, Unnat Bharat Abhiyan (UBA), Institutional Social Responsibility Clubs, Service Motto (SM) volunteering team, Eco Club, Swacchatha Action Plan etc., are actively functioning to enrich the human values and ethics and significance of environmental protection. The Environmental Science course enforces the influence of the professional engineering solutions in environmental and societal perspectives and exhibit the need for sustainable progress.

The curricula of R2014 and R2018 includes courses related to environment such as Waste Water Management, Environmental Science, Environmental Hazards and Management, Pollution and its Management, etc imparts environmental education among the students. Additionally, the value based education is offered through courses including Professional Ethics, Constitution of India and Universal Human Values (UHV) are offered as mandatory courses where the students learn about the involvement and service to the community. Additionally, the students are provided with sufficient awareness about various societal challenges though various outreach activities. Hence, it transforms the students into

responsible citiziens and also plays a vital role in development of sustainable societies in and around the surroundings of the institution. The multidisciplinary in learning promotes the flexibility in learning enabling life long learning among the students. The academic curriculum with interdisciplinary enrichment enables the students to learn various course of interest and apply the knowledge and skills in the own discipline of study.

One student one tree concept has been implemented at our campus effectively to make the students understand about the environment sustainability. Apart from this, the Institution is involved in various environmental related activities. Mahatma Gandhi National Council of Rural Education (MGNRCE) and Social Entrepreneurship, Swacchta and Rural Engagement Cell (SESREC) has awarded "One District One Green Champion" to the Institution as the outcome of such activities for 2020-2021. As per AICTE mandatory guidelines, all disciplines of engineering and technology has been offered with Environmental Science, Professional Ethics and Constitution of India.

In this aspects, the Institution has been enriched with curricula and syllabi representing necessary cross cutting issues related to environment, ethics and human values.

File Description	Document
Upload the list and description of the courses which address the Gender, Environment and Sustainability Human Values and Professional Ethics into the Curriculum	
Any additional information	View Document
Link for Additional Information	View Document

# 1.3.2 Number of value-added courses for imparting transferable and life skills offered during last five years.

Response: 122

#### 1.3.2.1 How many new value-added courses are added within the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
19	20	36	21	26

File Description	Document
List of value added courses (Data Template)	<u>View Document</u>
Brochure or any other document relating to value added courses	View Document
Any additional information	View Document
Link for Additional Information	View Document

#### 1.3.3 Average Percentage of students enrolled in the courses under 1.3.2 above.

Response: 120.5

# 1.3.3.1 Number of students enrolled in subject related Certificate or Add-on programs year wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
2301	3024	5066	6073	7810

File Description	Document
List of students enrolled	View Document
Any additional information	<u>View Document</u>
Link for Additional Information	View Document

# 1.3.4 Percentage of students undertaking field projects/ internships / student projects (Data for the latest completed academic year)

Response: 100

# $1.3.4.1\ \textbf{Number of students undertaking field projects}\ /\ \textbf{internships}\ /\ \textbf{student projects}$

Response: 2985

File Description	Document
List of programs and number of students undertaking field projects / internships / student projects (Data Template)	View Document
Any additional information	View Document
Link for Additional Information	View Document

### 1.4 Feedback System

# 1.4.1 Structured feedback for design and review of syllabus – semester-wise / year-wise is received from 1) Students, 2) Teachers, 3) Employers, 4) Alumni

**Response:** A. All 4 of the above

File Description	Document	
Any additional information	View Document	
Action taken report of the Institution on feedback report as minuted by the Governing Council, Syndicate, Board of Management	View Document	
URL for stakeholder feedback report	View Document	
Link for Additional Information	View Document	

### 1.4.2 The feedback system of the Institution comprises of the following:

Response: A. Feedback collected, analysed and action taken and report made available on website

File Description	Document	
Any additional information	View Document	
URL for stakeholder feedback report	<u>View Document</u>	
Link for Additional Information	<u>View Document</u>	

### **Criterion 2 - Teaching-learning and Evaluation**

### 2.1 Student Enrollment and Profile

### 2.1.1 Average Enrolment percentage (Average of last five years)

**Response:** 67.01

### 2.1.1.1 Number of students admitted year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
959	808	727	1044	1052

### 2.1.1.2 Number of sanctioned seats year wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
1170	1164	1530	1530	1549

File Description	Document
Institutional data in prescribed format (Data Template)	View Document
Any additional information	View Document
Link for Additional Information	View Document

### 2.1.2 Average percentage of seats filled against reserved categories (SC, ST, OBC, Divyangjan, etc. as per applicable reservation policy ) during the last five years ( exclusive of supernumerary seats)

Response: 50.12

### 2.1.2.1 Number of actual students admitted from the reserved categories year wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
429	360	391	479	493

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File Description	Document
Institutional data in prescribed format	<u>View Document</u>
Any additional information	View Document
Link for Additional Information	View Document

### 2.2 Catering to Student Diversity

# 2.2.1 The institution assesses the learning levels of the students and organises special Programmes for advanced learners and slow learners

#### **Response:**

Indian classroom is a typical mixture of students with varied ability. Basically, they differ from each other in terms of cognitive development and articulation of understanding the concepts taught. It will have great impact in the outcome and their development. K.S.Rangasamy College of Technology takes utmost care and approaches are devised to provide satisfaction to all the students.

Identifying the capacity of students as an advanced/slow learner will help to improve their performance both in academics as well as in their personal life. Students securing less than 50% are slow learners identified after each and every Continuous Assessment Test. Faculty classify the students as advanced/slow learners and plan their activities accordingly. Advanced learners are identified by the class handling faculty based on their academic performance and co-curricular activities. Fast learners are encouraged and supported to participate in project competitions, hackathons and workshops. They are guided to apply for fellowships, internships and support for enhancing their technical skills on recent trends. Slow learners are identified by the course handling faculty for every course based on their test performances and day to day activities. Student who is identified as a slow learner in analytical courses is good in theoretical and practical courses. Faculty log book has provision for recording the classes handled for slow learners. Mentoring is provided to both the advanced and slow learners to enhance their skills. Parents meeting is conducted for appreciating advanced learners and taking the support of parents for slow learners.

#### Activities for advanced learners:

- Encouraged to participate in Hackathons, competitions to improve their logical and design thinking
- Exposed to recent technologies in their domain and interdisciplinary too
- Facilitated to apply for fellowships and internships and for higher studies
- Encouraged to do "online courses" in NPTEL, Udemy, Coursera, and other online certifications.
- Final semester courses are provided in the fast-track mode facilitating them to go for internships and projects in industry
- Special training is being given to advanced / fast learners for placement companies which provide high package
- Encouraged to become professional society members like IE(I), IEEE, IETE, CSI, SAE
- Facilitated to attend credit courses offered by Industries and complete the international certification
- Associate them with the centres of excellence and trigger them towards the product / application development

### Activities for Slow learners

- Coaching classes by the course handling faculty. The improvement is recorded and follow up actions are taken.
- Special coaching classes by senior faculty for arrear courses before the semester examinations
- Bridge courses for lateral entry students
- Slow learners are paired with good performers to enhance their learning abilities (Peer group learning)
- Special emphasis on soft and communication skills for the students from rural background to improve these skills to compete with regular learners.
- Encouraged to participate in the e-learning

It is often observed that the slow and average learners become motivated and performing well in academics after participation in the technical, sport and cultural activities. The feel of 'recognition and appreciation' of their efforts and skills put them in a good stead.

File Description	Document	
Any additional information	View Document	
Link for Additional Information	<u>View Document</u>	

# 2.2.2 Student - Full time teacher ratio (Data for the latest completed academic year) Response: 9:1 File Description Document Any additional information View Document

**View Document** 

### 2.3 Teaching-Learning Process

Link for Additional Information

# 2.3.1 Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

#### **Response:**

To meet the conceptual needs of current time, teaching learning process has to undergo a transformation in Higher Educational Institutions. The gaps between the teaching learning process and the expected outcomes are identified and various student-centric methods increase the participation of the students in the learning process. There are key challenges in implementing these across all disciplines. The Institution believes that this is very significant in achieving the learning outcome of the students and these learning methodologies are facilitated by faculty to all students.

**Experiential Learning** 

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Students are taken to Industrial visits and they are encouraged to go for In-plant trainings. Two faculty members accompany the students during the industrial visits to facilitate the students with the understanding of the concepts they learn with the practical observations in the industry. Design oriented experiments / mini projects / open ended experiments are included in the laboratory syllabi to improve the design thinking. Activity based learning / project based learning ensures the better outcome. The students visit the library in search of reference books, journals related to the course for which they have to choose the mini project and for deciding the experiments for the particular laboratory course. This is to update their knowledge. A group of elective / open elective courses are included with practical component so that every student gets an experience of practical learning in the domain of his choice. 8 week Internship is mandatory for every student in R2018, Students are also permitted to do online internships, virtual laboratories, during the pandemic.

### Participative learning:

Faculty conduct role plays / group discussions / case studies/ Quizzes/ Flipped classes in the class rooms apart from conventional teaching methodologies. These methods demand student participation and all the students are invariably involved. Flipped class also improves the lifelong learning skills of the students. Feedback is received from the students through course end survey on the effectiveness of these methods. Based on the feedback received, same methodology is retained or new methodology is proposed.

### Mind Maps for creativity:

Faculty involves the students expand and develop novel ideas and to interact freely. Students are encouraged and presently made mandatory to take (Massive Open Online Courses) MOOCs / NPTEL. Students are encouraged to participate in symposiums, conferences, seminars, workshops and activities conducted by associations and various professional society chapters.

### **Problem Solving Methodologies**

This helps students to solve the real-world problems as well as apply the concepts learned in theory. Necessary internal and external training is arranged regularly to improve the problem solving ability. Case studies are given to analyse the problem particularly to develop the logical thinking / building ability. PSDS Neopat/examly portal are used for developing the programming skill of the students and solving the problems. Inter-department codeathons, M/s codechef and Neopat regular hackathons and programming challenges are conducted to improve the problem solving ability.

All academic activities are aimed and executed to elevate the students' knowledge, skills and build confidence in them.

File Description	Document	
Any additional information	<u>View Document</u>	
Link for Additional Information	View Document	

### 2.3.2 Teachers use ICT enabled tools including online resources for effective teaching and learning

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#### process.

#### **Response:**

Information Communication Technology (ICT) has a greater impact in student learning when all the teachers are digitally literate and understand how to integrate in curricula and teaching learning process. These approaches can lead to higher-order thinking skills and helps students to face the ongoing technical challenges in the society, workplace and entire world is becoming digital.

At KSRCT, the importance of digital literacy is understood and steps are taken accordingly. All faculty are advised to use ICT tools as required facilities are provided. Necessary knowledge transformation / insights given regularly. This helped the faculty to manage the impact of pandemic very effectively. All class rooms are equipped with multimedia projectors and computer connectivity. Further smart class rooms for online learning are also made available. With the system of online learning, all resources are made available online in MS Teams platform. Quizzes are being conducted through this platform regularly and continuous assessment tests and end semester exams are also conducted using this platform during the pandemic. This keeps the liveness of learning and assessment.

Programming courses are imparted through PSDS (a platform for interactive learning). This is a web IDE that gives more efficient and effective programming skills and improvising the logical thinking ability for students and faculty as well. It is the combo of different programming languages such as C, C++, Java, Python, PHP, Perl, SQL, HTML, JavaScript, JQuery. It has a hierarchy of three levels of testing such as low, medium and high. Students can practice / code anytime anywhere in this platform and improve their skills. It can be accessed both online and LAN environment. Unique features of this IDE is that it automatically checks the logic using test cases options. This platform is developed by the internal faculty of the Institution.

MOOC/NPTEL courses are taken by students with faculty mentors available for guidance. Course videos from NPTEL/MITOCW and other online resources are made available to students by faculty. Faculty also post their recorded video lectures and PPTs on selected topics. With blended learning using MOOC, flipped classes are also being conducted through you tube activities.

With the online mode, various events like guest lectures, conferences, symposiums are being conducted in online platforms enabling student participation from remote areas. Virtual laboratories helped and ensured the practical classes even during the pandemic. Faculty recorded the experiments with necessary demonstration and shared to the students for the better understanding. Faculty those who are expert in the subject or topics their lectures are captured and made available to the students. This helps the students who missed the topic and the slow learner for gaining good knowledge.

New normal education without ICT tool is impossible and online education is inevitable. KSRCT was perfectly ready and rolled out the online classes effectively.

IQAC conducts an internal audit every semester to make sure that faculty are using the ICT tools in the Teaching learning process as this helps to improve the learning quotient of the students.

File Description	Document
Any additional information	View Document
Link for Additional Information	View Document
Provide link for webpage describing ICT enabled tools including online resources for effective teaching and learning process	View Document

# 2.3.3 Ratio of students to mentor for academic and other related issues (Data for the latest completed academic year )

Response: 10:1

#### 2.3.3.1 Number of mentors

Response: 300

•	
File Description	Document
Upload year wise, number of students enrolled and full time teachers on roll	View Document
Circulars pertaining to assigning mentors to mentees	<u>View Document</u>
Any additional information	View Document
Link for additional information	View Document

### 2.3.4 Preparation and adherence of Academic Calendar and Teaching plans by the institution

#### **Response:**

IQAC, Academic Co-ordinator and the Principal prepare the academic calendar and circulate before the commencement of classes in the beginning of every year. This contains the annual working days, schedule of all curricular activities including continuous assessments and end semester examinations. All the academic activities of the Institution strictly adhere to the academic calendar usually. However, during the pandemic certain alterations were made to meet out new normal learning experience.

The planning for lecture delivery is done based on the academic calendar and faculty prepare the lesson plans hence forth. The academic calendar is sent as a circular and is made available to the faculty and students. This helps the students to plan and prepare themselves for internships during semester holidays.

Every faculty has a log book which includes an hour by hour lecture plan along with the mode of delivery for the entire course. This is prepared before the commencement of the course by the faculty concerned and approved by the Head of the Department. The log book also has the following details helping for effective delivery of the course content to attain the Programme outcomes.

- Vision and mission of the Institution and the Departments
- PEOs and Programme Specific Objectives
- Programme Outcomes and Course outcomes and their mapping
- Content beyond the syllabus
- Guest lectures arranged for various topics
- Experiential learning methodology used
- Theory/Tutorial/Laboratory classes handled
- Support classes for slow learners
- Performance analysis of students
- Remedial measures taken
- Class/personal time table

The academic plan is structured in accordance with the needs of Outcome Based Education prescribed by National Board of Accreditation (NBA). The contents of the plan include:

- Course pre-requisites
- Course objectives and outcomes
- Mapping of course outcomes with program outcomes
- Learning resources
- Delivery methodologies
- Assessment methods
- Detailed unit wise lecture plan
- Assignment and tutorial questions
- Model question paper
- Link to the video lectures
- Additional information over and above the curriculum

The details are well maintained in the department. KSRCT CMS - College Management System is an online portal / e-governance system has the academic calendar, Attendance and various schedules. Academic Audit Cell constituted by the IQAC will audit the Academic plans of each faculty and the audit reports are submitted to the Principal and Heads of the departments for necessary follow up action.

File Description	Document
Upload Academic Calendar and Teaching plans for five years	<u>View Document</u>
Any additional information	View Document
Link for Additional Information	View Document

### 2.4 Teacher Profile and Quality

### 2.4.1 Average percentage of full time teachers against sanctioned posts during the last five years

Response: 100

File Description	Document
Year wise full time teachers and sanctioned posts for 5 years(Data Template)	View Document
List of the faculty members authenticated by the Head of HEI	View Document
Any additional information	<u>View Document</u>
Link for Additional Information	View Document

# 2.4.2 Average percentage of full time teachers with Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. during the last five years (consider only highest degree for count)

Response: 30.59

# 2.4.2.1 Number of full time teachers with Ph.D./D.M/M.Ch./D.N.B Superspeciality/D.Sc./D'Lit. year wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
133	114	104	109	109

File Description	Document
Institutional data in prescribed format (Data Template)	View Document
Any additional information	View Document
Link for Additional Information	View Document

# 2.4.3 Average teaching experience of full time teachers in the same institution (Data for the latest completed academic year in number of years)

**Response:** 3.26

### 2.4.3.1 Total experience of full-time teachers

Response: 1098

File Description	Document
Institutional data in prescribed format	View Document
Any additional information	View Document
Link for Additional Information	View Document

### 2.5 Evaluation Process and Reforms

2.5.1 Average number of days from the date of last semester-end/ year- end examination till the declaration of results year-wise during the last five years

Response: 16.8

# 2.5.1.1 Number of days from the date of last semester-end/ year- end examination till the declaration of results year wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
15	16	17	18	18

File Description	Document
Institutional data in prescribed format (Data Template)	View Document
Any additional information	View Document
Link for Additional Information	View Document

# 2.5.2 Average percentage of student complaints/grievances about evaluation against total number appeared in the examinations during the last five years

Response: 0

### 2.5.2.1 Number of complaints/grievances about evaluation year wise during the last five years

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2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	0

File Description	Document
Number of complaints and total number of students appeared year wise	View Document
Any additional information	View Document
Link for Additional Information	View Document

# 2.5.3 IT integration and reforms in the examination procedures and processes including Continuous Internal Assessment (CIA) have brought in considerable improvement in Examination Management System (EMS) of the Institution

#### **Response:**

#### **Examination procedures**

All the candidates registering for the examination must follow the rules and regulation framed by the Office of Controller of Examinations (CoE). Students have to Register for semester examinations as per Academic schedule as well as Circular issued by the Office of Controller of Examinations. Hall tickets are issued prior to commencement of Examinations. Usually, Practical and Project Viva voce are conducted prior to Theory examinations or based on the situation. More weightage is given for internal assessment in practical courses.

Question papers are prepared as per revised Bloom's Taxonomy and Course Outcomes. Question paper setters and Examiners related to various activities are recommended by the Board of Studies. Question paper Scrutiny is carried out and any error found is rectified by Module coordinators or subject expert assigned by Chairmen Board of Studies.

Semester Examination is conducted by the Examination Cell headed by Principal. Two Deputy Controllers are responsible for smooth conduct of examinations. After examination the answer booklets are collected and immediately dispatched to the Office of CoE for further processes.

After checking number of answer scripts in each subject, dummy number is assigned. Marks are entered in the system against respective Course outcomes. Result Processing is done immediately and Request is send to University Nominee to fix the date for Result Passing Board Meeting.

Results are declared and students can opt for photocopy as well as revaluation based on their needs. Examination Audit is conducted to improve the Examination system.

#### **Processes/Procedures integrating IT**

The Examination Management System (EMS) is maintained to integrate many of the activities of the Internal and End semester examinations. Right from the student registrations and payment of examination fee are made through an online process with personal log-in details. EMS also facilitates,

- Hall Ticket generation
- Bar coded OMR Sheet generation / dummy number generation
- Present & absentees statements and D-Form generation
- Scanning, Coding and decoding of answer scripts
- Bundling of answer scripts subject wise
- Generation of bundle key for digital evaluation
- Online accessing and valuation of digital answer scripts by valuators
- Results tabulation
- Publication of results
- Results analysis branch wise and semester wise
- Revaluation registrations through online
- Transcripts

In addition to this conduction of online examination using internally developed AI featured platform (DigiPro).

For programming based courses examination conducted using the PSDS platform. Periodic tests and assignments are evaluated and data is maintained in the CTCMS. Students can track their performance in CTCMS. In addition to the above Computer based tests / MCQs are also conducted for the assessment of students in Career Competency Development. Question banks are also available in electronic format.

#### **Continuous Internal Assessment System**

In the present Regulation R-2018, Quiz is introduced in the internal continuous assessment. Internal Evaluation generally consists of three tests each carrying ten marks, Three assignment / Tutorial for five marks and two Quizzes for ten marks. Another important step taken towards Skill improvement is Internship. It is made compulsory for all the students and it is mandatory to qualify for the Degree. Provision for the missed test and improvement tests are facilitated for needy students. Final Project viva voce is planned to conduct with industry experts as external examiners.

The Institution keeps its examination system open for modifications and thus strengthens it from time to time, ensuring the system fool proof and address the grievances of students, if any. The Institutional reforms in all the activities of the examination system are kept at par with the reforms pushed by the AICTE.

File Description	Document	
Any additional information	<u>View Document</u>	
Link for Additional Information	View Document	

### 2.6 Student Performance and Learning Outcomes

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### 2.6.1 Programme and course outcomes for all Programmes offered by the institution are stated and displayed on website and communicated to teachers and students.

### **Response:**

Learning outcomes help the faculty as well as the students to come to a common understanding about the objectives and outcomes of the program. The purpose of these outcomes is to make expectations and priorities clear. The students will know what they will be able to do upon completion of the programme. Therefore, it is necessary that they are communicated to all stake holders properly.

Six UG programmes are accredited by NBA under Tier I category and Outcome based Education is being followed in all the departments. As per the Washington Accord, "The graduate attributes are exemplars of the attributes expected of a graduate from an accredited programme." The Graduate Attributes are well defined by the National Board of Accreditation (NBA). Every department has separate vision and mission statements. Programme Educational Objectives (PEOs) are framed in consistent with the mission of the department. Programme Specific Outcomes (PSOs) are framed to help attain the PEOs and hence the Mission of the department. The curricula are designed such that the attainment of Programme Outcomes (POs) and Programme Specific Outcomes is possible. Every course in the curriculum has 5 course outcomes (COs) which are specific and measurable and they help to attain the programme outcomes and hence, the Outcome Based Education (OBE) is being practiced.

To help students understand the process of Outcome Based education (OBE), faculty advisors discuss about Programme Specific Outcomes and the Programme outcomes in the beginning of every semester in the class. They are further displayed/printed in

- College website http://www.ksrct.ac.in
- Intranet http://ksrctcms
- Displayed in all prominent places of the department faculty cabins, department library, main library, classrooms and laboratories, etc.
- Regulation documents
- Faculty Class Records, Notice Boards and Corridors of Department
- Laboratory Manuals

Apart from this, Programme outcomes are made reachable to all the stakeholders of the programme through faculty workshops.

The Course outcomes are disseminated to students through

- CTCMS
- College website
- Laboratories
- Student Induction Programme
- Meetings/ Interactions with employers
- Parent meet
- Faculty meetings
- Alumni meetings

The faculty handling the course discusses the COs in the class in the beginning of the semester and

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correlates it when completing the respective portion of the syllabus. All assessment Question papers including Tests, Assignments / Tutorials and Quizzes have the questions with the corresponding CO being addressed. The knowledge level of the questions is also provided in the question papers. Students can assess themselves with the outcomes they are good at as well as their knowledge levels in these outcomes.

The course end survey takes the feedback from every student on the understanding of every CO in all the courses offered in a particular semester. The outcome of these surveys is further discussed in Programme Assessment Committee (PAC) meetings and Department Advisory Board (DAB) meetings and further actions in the Teaching learning process is carried out for improving the attainment of COs.

In all the interactions with the students, awareness on POs, PSOs and COs is consciously promoted.

File Description	Document
Upload COs for all courses (exemplars from Glossary)	View Document
Any additional information	<u>View Document</u>
Link for Additional Information	<u>View Document</u>

### 2.6.2 Attainment of programme outcomes and course outcomes are evaluated by the institution.

### **Response:**

The attainment of course outcomes is based on the various assessments conducted throughout the semester for every course including tests, assignments / tutorials, quizzes and course end survey. The course end survey is considered for 20% of the final attainment and 80% of the attainment is calculated from all the assessments. The details of assessment methods are given below.

#### **Attainment of COs**

Two different assessment methods are adopted to measure the attainment of COs in each course.

- 1. Direct assessment method (80%)
- 2. Indirect assessment method (20%)

#### **Direct assessment methods**

Continuous assessment tests, end semester examinations, assignments, tutorials, and quizzes are used for measuring the COs. Rubric based assessments are used for projects. Module and course coordinators ensure the quality of assessment questions and COs coverage. Module coordinators scrutinize the end semester questions to check if all COs are addressed and their learning levels.

#### **Indirect assessment methods**

Indirect assessment of COs is obtained from course end survey reports collected at the end of every

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semester. Data on students' experiential learning such as paper presentations, project contests, internships, in-plant trainings, industrial visits, career competency development and workshops organized are used to measure the attainment.

#### **Cumulative COs attainment**

COs attainment = [80% Direct assessment + 20 % Indirect assessment]

Cumulative COs attainment is calculated for a course with the class strength N.

#### **Attainment of POs and PSOs**

Different assessment tools used to measure the attainment of POs & PSOs with frequency of evaluation

#### **Direct Assessment**

POs and PSOs are measured directly from the COs. The attainment of POs and PSOs through curriculum can be quantitatively measured by assigning weights to the COs that are contributing to a particular PO. COs are measured from the data collected from assignments/tutorials, internal assessment tests, course end surveys etc. x1, x2, x3 are course outcomes of a course X and y1,y2, y3 are that of another course Y; w1, w2 and w3 are weights assigned to the level of contribution viz, Substantial, Moderate and Slight respectively.

#### **Indirect Assessment**

The programme exit survey is a questionnaire answered by every student upon completion of the programme. Alumni survey and employer survey and experiential learning such as internships, workshops etc are used to obtain indirect attainment of POs and PSOs.

#### **Cumulative POs & PSOs Attainment**

The attainment of POs and PSOs are based on the contribution of direct and indirect assessments as per the weightage given below.

PO / PSO attainment =70% of Direct assessment + 30% of Indirect assessment

Cumulative POs and PSOs attainment is recorded at the end of every academic year, analyzed and deliberated in BoS, PAC and DAB for the improvement of POs and PSOs in the forthcoming years.

File Description	Document	
Any additional information	<u>View Document</u>	
Link for Additional Information	View Document	

### 2.6.3 Pass Percentage of students(Data for the latest completed academic year)

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**Response:** 96.14

### 2.6.3.1 Total number of final year students who passed the examination conducted by Institution.

Response: 921

# 2.6.3.2 Total number of final year students who appeared for the examination conducted by the Institution.

Response: 958

File Description	Document	
Upload List of Programmes and number of students passed and appeared in the final year examination(Data Template)	View Document	
Any additional information	<u>View Document</u>	
Link for the annual report	<u>View Document</u>	
Link for additional information	View Document	

### 2.7 Student Satisfaction Survey

### 2.7.1 Online student satisfaction survey regarding teaching learning process

**Response:** 3.6

File Description	Document
Upload database of all currently enrolled students	View Document

### **Criterion 3 - Research, Innovations and Extension**

### 3.1 Promotion of Research and Facilities

3.1.1 The institution's Research facilities are frequently updated and there is a well defined policy for promotion of research which is uploaded on the institutional website and implemented

<b>Response:</b>		
<b>Objective:</b>		

#### To promote research and development activities at K.S. Rangasamy College of Technology

Research Promotion Policy of KSRCT aims to share knowledge through quality education, research and innovation. To achieve this goal, the Institution seeks to strengthen research and innovation activities by motivating members of faculty and students in their desired path of research and career. Faculty and students are motivated to come up with new ideas to deal with hands-on practical problem-solving projects in teamwork. Also Faculty and student are encouraged to work on inter-disciplinary/ multi-disciplinary research collaboration with other departments, institutions and universities.

Members of faculty are motivated and rendered financial support to apply for Research Grants/Infrastructure to various funding agencies of both Government and Non-Government Organizations. The Institution facilities the faculty in preparing an effective funding project proposals and budget, which are constructive and valuable for the upcoming generation to meet out their needs.

The Institution supports the researchers through Internal Funding-Seed Grants. The Research and Development division has mandated Research Funding Schemes through Seed Grants to encourage faculty researchers for Research paper publications, Patents, Book / Book Chapter publications, collaborations with National and International Organization to conduct programmes such as conferences, seminars, workshops project proposal, patent filing and FDPs related to research and innovation. This seed grant scheme offers financial assistance up to Rs 5 lakh to individual or to team of faculty (Interdisciplinary/Multidisciplinary Research Centers) to establish basic research infrastructure.

The Institution provides incentives as a success factor to travel in the path of research. It is proposed that a faculty succeeding in getting the external research grants from outside agencies shall be entitled for an appreciable incentive for the sanctioned project.

Faculty members are motivated to apply for the travel grant to the funding agencies for travelling aboard in accordance with his/her research activity. The Institution supports the faculty members to attend conference/workshop relevant to their field of research in India and abroad with on duty and a fund to pay as the registration fee. Faculty members are permitted to present as keynote speaker/plenary lecture in conferences/seminars, etc. The college also funds the faculty members for preparing the testing analysis report and for filing patent.

PG students are motivated to join as full-time research scholar under the "Institutional Research Fellowship" The selected candidates will be paid a monthly stipend of Rs 10,000/ for a period of three

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years. The job opportunities also provided to students, who have completed Ph.D in the Institution under JRF/SRF scheme.

The faculty members completing Ph.D degree are motivated with an increment of Rs. 10,000/- for Engineering discipline and Rs. 6,000/- for Science and Humanities. The Institution provides 24 x 7 hours of lab facilities, internet, e-library and library utilization to install the research culture among faculty and scholars.

To promote research activities, the Institution has a well-defined research promotional policy in sync with the Vision and Mission. This promotional policy is updated and implemented in line with the current scenario and made available in the college website.

File Description	Document
Minutes of the Governing Council/ Syndicate/Board of Management related to research promotion policy adoption	View Document
Any additional information	<u>View Document</u>
URL of Policy document on promotion of research uploaded on website	View Document

# 3.1.2 The institution provides seed money to its teachers for research (average per year, INR in Lakhs)

Response: 6.16

# 3.1.2.1 The amount of seed money provided by institution to its faculty year-wise during the last five years (INR in lakhs).

2020-21	2019-20	2018-19	2017-18	2016-17
2.36	8.98	4.27	9.72	5.48

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File Description	Document
Minutes of the relevant bodies of the Institution	View Document
List of teachers receiving grant and details of grant received	View Document
Budget and expenditure statements signed by the Finance Officer indicating seed money provided and utilized	View Document
Any additional information	View Document

### 3.1.3 Percentage of teachers awarded national / international fellowship for advanced studies/research during the last five years

**Response:** 5.46

# 3.1.3.1 The number of teachers awarded national / international fellowship for advanced studies / research year wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
19	30	16	20	19

File Description	Document
List of teachers and their international fellowship details	View Document
e-copies of the award letters of the teachers	View Document
Any additional information	View Document

### 3.2 Resource Mobilization for Research

3.2.1 Grants received from Government and non-governmental agencies for research projects, endowments, Chairs in the institution during the last five years (INR in Lakhs)

**Response:** 819.46

# 3.2.1.1 Total Grants from Government and non-governmental agencies for research projects, endowments, Chairs in the institution during the last five years (INR in Lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
42.674	209.952	37.588	197.506	331.735

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File Description	Document
List of project and grant details	View Document
e-copies of the grant award letters for research projects sponsored by government and non- government	View Document
Any additional information	View Document

### 3.2.2 Percentage of teachers having research projects during the last five years

**Response:** 3.04

### 3.2.2.1 Number of teachers having research projects during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
8	8	15	12	15

File Description	Document
Names of teachers having research projects	<u>View Document</u>
Any additional information	<u>View Document</u>
Link for additional information	View Document

### 3.2.3 Percentage of teachers recognised as research guides

**Response:** 18.1

### 3.2.3.1 Number of teachers recognized as research guides

Response: 61

File Description	Document
Upload copies of the letter of the university recognizing faculty as research guides	View Document
Any additional information	<u>View Document</u>
Link for additional information	<u>View Document</u>

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### 3.2.4 Average percentage of departments having Research projects funded by government and non-government agencies during the last five years

Response: 50

### 3.2.4.1 Number of departments having Research projects funded by government and non-government agencies during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
5	3	8	8	6

### 3.2.4.2 Number of departments offering academic programes

2020-21	2019-20	2018-19	2017-18	2016-17
12	12	12	12	12

File Description	Document
Supporting document from Funding Agency	View Document
List of research projects and funding details	View Document
Any additional information	View Document
Paste link to funding agency website	View Document

### 3.3 Innovation Ecosystem

3.3.1 Institution has created an eco system for innovations, creation and transfer of knowledge supported by dedicated centers for research, entrepreneurship, community orientation, Incubation etc.

#### **Response:**

### **Objective:**

- To Promote Eco system for Innovation activities at K.S.Rangasamy College of Technology
- KSRCT is a great Innovation point with Incubation and Start-up Centre/ Hub and it will be the most preferred destination for Start-ups by 2023. KSRCT offering the following support to provide special focus on students innovations by creating impact on social centric activities.
- Seed money and research facility are provided to the members of faculty/students who come out with new ideas/products
- KSRCT established 24x7 AICTE-IDEA (Idea, Development, Evaluation & Application) Lab

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- sponsored by AICTE, to encourage students for application of science, technologies, engineering and mathematics (STEM) fundamentals towards enhanced hands-on experience, learning by doing and product visualization from first year degree programme.
- MSME has approved our Institution to setup Business Incubation Centre worth of Rs.1 crore and idea collection from various stakeholders. MSME will fund 15 lakhs per idea for maximum of 10 ideas.
- "KSRCT Innovation Technology Park" is established to enhance critical, innovative and design thinking in order to develop new products from incubation to all the phases of entrepreneurship.
- Entrepreneurship Development Cell (EDC) supports businesses and innovators as they develop, launch, and commercialize their ideas and motivate the students to bring out their latent spirit of Entrepreneurship. EDC actively connected with EDI Ahmadabad, TNEDII-Chennai, ICT academy, SPC Salem, DIC Salem etc.
- KSR-PTC Centre of Excellence for Manufacturing, which consists of world class facility established with 7 labs which includes 3D printing, Internet of Things (IoT) along with industry standard software, hardware, machineries and certified training under one roof for developing high quality skilled workforce of industry relevance.
- Animal house and ethical committee facility is available in the Institution for the teaching, training and research facilities in emerging field of experimental pharmacology and medicine.
- As per National Innovation Start-up Policy (NISP), Tamil Nadu Innovation and Startup Policy (TNISP), KSRCT has created "Centre for Incubation and Start-ups (CIS)" and implemented KSRCT Startup Policy for faculty, Students and Alumni.
- KSRCT-Institute Innovation Council (IIC) was set up and it is associated with EDC, Innovation Cell, Internship Cell and Intellectual Property Rights (IPR) Cell and it has organized 250+ awareness programmes like seminars, webinars, workshops, boot camp etc.,
- It extends support to social entrepreneurship for a positive social impact and inclusion.

This Policy focuses on driving innovation and entrepreneurship in the Campus through actions to:

- *Create conducive ecosystem to encourage innovation and entrepreneurship.*
- Enable seed fund for novel innovation by students and faculty.
- Extend support for social entrepreneurship to create positive social impact and inclusion.
- Establish global accessibility, connections and partnerships.
- Host hackathons, idea competitions, mini-challenges etc. to scout ideas from young minds towards industry problems and social issues.
- Generate intellectual properties and commercialize innovations through technology transfer, technology licensing and start-ups, etc.
- Colleting the idea through idea box and TapRoot challenge
- Convert students Project into Product, Research into Revenue for societal benefits.

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File Description	Document
Upload any additional information	<u>View Document</u>
Paste link for additional information	View Document

3.3.2 Number of workshops/seminars conducted on Research methodology, Intellectual Property Rights (IPR),entrepreneurship, skill development during the last five years.

Response: 502

3.3.2.1 Total number of workshops/seminars conducted on Research methodology, Intellectual Property Rights (IPR), entrepreneurship, skill development year-wise during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
116	90	93	105	98

File Description	Document
Report of the event	<u>View Document</u>
List of workshops/seminars during last 5 years	<u>View Document</u>
Any additional information	View Document

#### 3.4 Research Publications and Awards

3.4.1 The Institution ensures implementation of its stated Code of Ethics for research through the following: 1. Inclusion of research ethics in the research methodology course work 2. Presence of Ethics committee 3. Plagiarism check through software 4. Research Advisory Committee

**Response:** A. All of the above

File Description	Document
Any additional information	View Document
Link for additional information	View Document

3.4.2 Number of Ph.D's registered per teacher (as per the data given w.r.t recognized Ph.D guides/supervisors provided at 3.2.3 metric) during the last five years

Response: 1.41

3.4.2.1 How many Ph.Ds are registered within last 5 years

Response: 100

3.4.2.2 Number of teachers recognized as guides during the last five years

Response: 71

File Description	Document
List of PhD scholars and their details like name of the guide, title of thesis, year of award etc	<u>View Document</u>
URL to the research page on HEI web site	View Document

# 3.4.3 Number of research papers per teachers in the Journals notified on UGC website during the last five years

**Response:** 1.78

3.4.3.1 Number of research papers in the Journals notified on UGC website during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
191	118	83	108	178

File Description	Document
List of research papers by title, author, department, name and year of publication	View Document
Any additional information	View Document

# 3.4.4 Number of books and chapters in edited volumes / books published per teacher during the last five years

Response: 1.77

### 3.4.4.1 Total number of books and chapters in edited volumes/books published and papers in national/international conference proceedings year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
101	108	175	179	111

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File Description	Document
List books and chapters in edited volumes / books published	View Document
Any additional information	View Document

# 3.4.5 Bibliometrics of the publications during the last five years based on average citation index in Scopus/ Web of Science or PubMed

**Response:** 6.58

File Description	Document
Bibliometrics of the publications during the last five years	View Document
Any additional information	<u>View Document</u>

# 3.4.6 Bibliometrics of the publications during the last five years based on Scopus/Web of Science - hindex of the Institution

**Response:** 23.5

File Description	Document
Bibiliometrics of publications based on Scopus/ Web of Science - h-index of the Institution	View Document
Any additional information	View Document

### 3.5 Consultancy

# 3.5.1 Revenue generated from consultancy and corporate training during the last five years (INR in Lakhs).

Response: 44.09

### 3.5.1.1 Total amount generated from consultancy and corporate training year-wise during the last five years (INR in lakhs).

2020-21	2019-20	2018-19	2017-18	2016-17
18.198	5.744	5.103	6.465	8.579

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File Description	Document
List of consultants and revenue generated by them	<u>View Document</u>
Audited statements of accounts indicating the revenue generated through consultancy and corporate training	View Document
Any additional information	View Document

# 3.5.2 Total amount spent on developing facilities, training teachers and staff for undertaking consultancy during the last five years (INR in Lakhs).

Response: 90.21

# 3.5.2.1 Total amount spent on developing facilities, training teachers and staff for undertaking consultancy during the last five years (INR in Lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
23.679	19.429	29.777	10.362	6.959

File Description	Document
List of training programmes, teachers and staff trained for undertaking consultancy	View Document
List of facilities and staff available for undertaking consultancy	View Document
Audited statements of accounts indicating the expenditure incurred on developing facilities and training teachers and staff for undertaking consultancy	View Document
Any additional information	<u>View Document</u>

#### 3.6 Extension Activities

3.6.1 Extension activities are carried out in the neighbourhood community, sensitising students to social issues, for their holistic development, and impact thereof during the last five years

### **Response:**

### **Objective:**

• To carry out the extension activities in neighborhood for the community sensitizing students for

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holistic development.

Extension activities are categorized into as follows:

#### 1. Social Service

Interested members of faculty and students are involved to support the societal needs

#### 1. Developing Application

Institution strongly believes that Science and Technology shall solve the social issues. Hence, the members of faculty and students are motivated to develop applications/ products to cater to the needs of the society.

The students of K S Rangasamy College of Technology apart from academic studies lends their hands to social service. They create awareness towards community issues, gender disparities, Social inequity etc and inculcating values and commitment to society. The processes and strategies inherent in such activities relevantly sensitize students to the social issues and contexts. Sustainable practices of the Institution leads to better performance results in successful outcome in terms of generating knowledge useful for the learners as well as the community. The extension also is the education which emphasizes community service. The students of KSRCT have been serving the society through various extension and outreach activities regularly. The activities are conducted in collaboration with communities and non-government organizations through NSS, NCC, UBA, YRC, RRC Swatch Bharath and Women Empowerment Cell.

National Service Scheme of KSRCT organize activities like Blood donation camp, Plastic awareness program, Yoga day Celebration, Vigilance Awareness, Dental Camp, Breast Cancer Awareness, Eye Screening Camp, Tree Plantation, Cancer Awareness Camp, Road Safety Rally, Painting and Renovation of school buildings, orphanage and old age home visit., etc.

Students participate actively in the "International Yoga Day" as Yoga is considered to be the best art to control the mind through the body. Activities like Save River and tree plantation drive have sown seed for the Green Revolution, Blood donation camps in collaboration with the government hospitals (twice a year), where the members of faculty and students donate blood for a noble cause. Our NSS unit has a wide vision of protecting us from global warming by creating awareness among the people through programs like saying 'NO' to plastics. During covid19 pandemic, our NSS team had distributed masks, food, sanitizer to the Public & the Police department. They have taken care of arranging guest talks on topics related to Gender issues, Health care, Women's security, etc.

Swatch awareness rally, Open Defecation Free campaign, Free from plastics campaign were conducted through Swatch Bharath and Unnat Bharath Abhiyan.

The National Cadet Corps of KSRCT conducted Blood donation camp, Dental camp to aid the poor people and students. NCC organized army attachment camp, combined army training and trekking for students to mould them to serve the nation. NCC organized awareness programs on Road safety, Environmental awareness and other community services for the benefit of society.

NCC, NSS, YRC, RRC of KSRCT in association with Tamil Nadu Police organized awareness programme on "Narcotic Drugs & Psychotropic Substances" to the students. Officials from the department of Police Namakkal District acted as a resource person.

Apart from the above, the Institution also has SM – Social Motto volunteering Team. It comprises of both members of faculty and students. This team vibrantly involves in various social service activities by creating positive impacts in the life of many needy people.

File Description	Document	
Upload Any additional information	<u>View Document</u>	
Paste link for additional information	View Document	

3.6.2 Number of awards and recognition received by the Institution, its teachers and students for extension activities from Government / Government recognised bodies during last five years

**Response:** 96

3.6.2.1 Total number of awards and recognition received for extension activities from Government/Government recognised bodies year-wise during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
16	62	06	3	09

File Description	Document
Number of awards for extension activities in last 5 year	View Document
e-copy of the award letters	View Document
Any additional information	View Document

3.6.3 Number of extension and outreach programs conducted by the institution through NSS/NCC, Government and Government recognised bodies during the last five years

**Response:** 77

3.6.3.1 Number of extension and outreach programs conducted by the institution through NSS/NCC, Government and Government recognised bodies during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
13	18	18	16	12

File Description	Document
Reports of the event organized	View Document
Number of extension and outreach Programmes conducted with industry, community etc for the last five years	View Document
Any additional information	View Document

# 3.6.4 Average percentage of students participating in extension activities listed at 3.6.3 above during the last five years

**Response:** 69.73

# 3.6.4.1 Total number of students participating in extension activities listed at 3.6.3 above year-wise during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
2163	2672	2939	3660	1514

File Description	Document
Reports of the event	View Document
Average percentage of students participating in extension activities with Govt or NGO etc	View Document
Any additional information	View Document

### 3.7 Collaboration

3.7.1 Number of Collaborative activities per year for research/ faculty exchange/ student exchange/ internship/ on -the-job training/ project work

Response: 311.6

3.7.1.1 Total number of Collaborative activities per year for research/ faculty exchange/ student exchange/ internship/ on \_the-job training/ project work

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2020-21	2019-20	2018-19	2017-18	2016-17
452	320	335	279	172

File Description	Document
Number of Collaborative activities for research, faculty etc	View Document
Copies of collaboration	<u>View Document</u>
Any additional information	<u>View Document</u>

3.7.2 Number of functional MoUs with institutions of national, international importance, other institutions, industries, corporate houses etc. during the last five years (only functional MoUs with ongoing activities to be considered)

**Response:** 69

3.7.2.1 Number of functional MoUs with institutions of national, international importance, other Institutions, industries, corporate houses etc. year wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
19	8	10	14	18

File Description	Document
e-copies of the MoUs with institution/ industry/ corporate house	View Document
Details of functional MoUs with institutions of national, international importance, other Institutions etc during the last five years	View Document
Any additional information	View Document

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### **Criterion 4 - Infrastructure and Learning Resources**

### 4.1 Physical Facilities

4.1.1 The Institution has adequate infrastructure and physical facilities for teaching- learning. viz., classrooms, laboratories, computing equipment etc.

### **Response:**

#### **Infrastructure Facilities**

KSRCT campus is located in a sprawling 28.085 acres (1,13,656 sq m) of lush green **campus with built up area** of 1,22,893.74 sq m with 14 blocks. This sprawling campus exudes peaceful and relaxed environment which is an ideal place for teaching-learning process.

- 1. The ambience of the campus is beautified with greeneries, covers area of 3.16 acres (12156 sq m)
- 2. To strengthen an effective teaching-learning environment the campus is equipped with the following facilities S.No. Description No. of Roo

S.No.	Description	No. of Rooms		
		Available	Require	
			(as per AICTE	
1	Class Rooms	58	56	
2	Tutorial Rooms	22	20	
3	Class Room (P.G.)	18	18	
4	Laboratories	109	95	
5	Seminar Halls with ICT Facility	07	06	
6	Smart Class Rooms	13	12	
7	Research Laboratories	08	01	

- All the class rooms are equipped with ICT facilities for effective teaching learning process
- Apart from regular class rooms, institution has smart class room, seminar hall with ICT / AV facility to facilitate the students with flipped class and blended learning
- To provide practical exposure to the students, every department is equipped with industry supported/sponsored laboratories. Product development / Project laboratories to facilitate the students with necessary facilities to do the projects.
- In order to encourage the **research activities**, every department is equipped with research lab. The laboratories are upgraded periodically to meet out the current requirements. In this connection, a few laboratories are exclusively intended for research activities, such as DST-FIST, DBT-Star College Scheme, DBT sponsored PG programme for M.Tech. Biotechnology through GAT-B and research lab through RPS.
- Centres of Excellence (Laboratories) established to enhance the competency in specific domain in collaboration with reputed corporates like Virtusa in the Software Testing,

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Customers Relationship Management (CRM) and .Net Technologies, Aspire Systems in Full Stack Development, Augusta Hitech in Blockchain Technology, Autodesk in Fusion 360 and Revit Architecture, and Centre for Women Empowerment with DXC Technology in Cloud Infrastructure. The specific domains include Design and Analysis, Manufacturing Process, Virtual Instrumentation, Addictive Manufacturing, Reverse Engineering, Internet of Things, Big Data and Data Analytics, Power system automation, Automation Anywhere University for the Robotic Process Automation.

- **AICTE IDEA Lab:** The Institution is one among the 49 Institutions selected across the country to establish 1.34 Crore worth Lab. The objective of the lab is to convert innovative ideas into products.
- The Institution has 1420 **computers in** 27 Labs with LAN and internet facilities. This includes central computing facility with 144 computers which is open between 09.00 am and 10.00 pm..
- The institution has **Wi-Fi facility** at various access points through which students/faculty can surf.
- The **English Language Enrichment Centre** covers an area of 230 sq. m, facilitates learners to excel in all the four skills of the language LSRW.
- The **seminar halls and smart classrooms** are well equipped with ICT facilities to promote effective teaching-learning process
- The Institution has **IIC** supported by MoE to promote innovation, start up and entrepreneurial ecosystem in the Campus.

File Description	Document	
Upload Any additional information	<u>View Document</u>	
Paste link for additional information	View Document	

# 4.1.2 The institution has adequate facilities for cultural activities, yoga, games and sports (indoor & outdoor); (gymnasium, yoga centre, auditorium, etc.,)

#### **Response:**

The Institution is keen not only in developing the technical skills of the students, but also focus on the extra-curricular activities such as sports/games, cultural activities. In addition to this to ensure the health and fitness of the faculty / students, gym and yoga centre is available in the campus.

- 1. To establish the sports facilities, adequate budget is allotted to procure the kits and renovating the facilities.
- 2. The Institution has a playground with an area of 8 acres. It consists of indoor sports complex with ultra-modern gymnasium as well as facilities for outdoor sports such as basketball court and tennis court along with a cricket ground and football fields. In addition, a swimming pool with an area of 2178 sq ft and open-air gymnasium are also functional.
- 3. The Institution is provided with an indoor stadium (6400) and facilitated with flood light basketball / Badminton Courts
- 4. To conduct the curricular and co-curricular events, an **auditorium** with an area of 10792.28 sq. ft.

is made available for students

5. To have the inner peace, a yoga centre / meditation hall is available with 1435.23 sq. ft for students and faculty

### **Facilities of sports activities:**

S.No.	Description	Nos	User rate	Area (Sq Ft)	Year of Establishment
	Out	tdoor G	ames	(5 <b>q</b> Ft)	
1	400m standard Athletic Track /	1	50	155727	1998
	Discus throw / Javelin throw / Shot				
	put				
2	Football field	1	20	59608.00	1998
3	Hockey Field	1	20	56000.00	1999
4	Volleyball Court	3	14	5200.00	2000
5	Basketball Court	1	12	5000.00	2002
6	Tennis Court With fence	1	06	7600.00	2002
7	Ball Badminton Courts	4	10	14000.00	2002
8	Kabaddi Courts	4	12	6000.00	2003
9	Handball Court	_ 1	12	10000	2008
10	Kho-Kho Court	1	12	10000	2009
11	Cricket field	1	22	162134.00	2003
	Inc	door Ga	ames		
12	Table Tennis Courts	6	06	6400	2000
13	Carom	10	12		2000
14	Badminton Courts	4	10		2003
15	Basketball Court	1	20		2002
	G	ymnasi	ium		
16	Indoor GYM (Men)	1	100	3200	2004
17	Indoor GYM (Women)	1	28	960	2017
18	Open Gym	2	50	1200	2019
	Y	oga Cei	ntre		
19	Meditation Hall	1	50	1435.23	2020
	Swi	imming	Pool		
20	Swimming Pool	1	15	2178	2003
	A	uditori	um		
21	Auditorium	1	900	10792.28	2008
22	Dressing room / Wash room (Male and female)	1	20	1200	2012

### **Facilities of Cultural Activities**

KSRCT has a musical club namely **Qudraphone** and dance club namely **KSRCT Dance Club**.

- 1. The musical club is well-equipped with instruments like key boards, guitars, drum set and audio systems for the practice of students in 1076.00 sq.ft
- 2. KSRCT Dance room with size of 1076.00 sq ft has mirror, floor mat and AV system.

File Description	Document
Upload any additional information	<u>View Document</u>
Geotagged pictures	View Document
Paste link for additional information	View Document

# 4.1.3 Percentage of classrooms and seminar halls with ICT- enabled facilities such as smart class, LMS, etc. (Data for the latest completed academic year)

Response: 100

#### 4.1.3.1 Number of classrooms and seminar halls with ICT facilities

Response: 105

File Description	Document
Upload any additional information	<u>View Document</u>
Institutional data in prescribed format	View Document
Paste link for additional information	View Document

# 4.1.4 Average percentage of expenditure for infrastructure augmentation excluding salary during the last five years (INR in Lakhs)

Response: 69.44

# 4.1.4.1 Expenditure for infrastructure augmentation, excluding salary year-wise during last five years (INR in lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
500.78	756.15	310.04	439.01	511.40

File Description	Document
Upload Details of Expenditure, excluding salary during the last five years	View Document
Upload audited utilization statements	<u>View Document</u>
Upload any additional information	<u>View Document</u>
Link for any additional information	View Document

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### 4.2 Library as a Learning Resource

### 4.2.1 Library is automated using Integrated Library Management System (ILMS)

#### Response:

Our College Library is automated with the details below:

Name of the ILMS Software : KSRCTCMS - LMS

Nature of Automation (fully or partially) : Fully Automated

Version : 8.0.86.

Year of Automation : 2009

Version: : 8.0.90. - Updated 2020

#### **About Library**

KSRCT has a Library housed in a two-storeyed building. The ground floor houses book stack area, circulation counter, and online public access catalogue facility. The first floor houses the Periodical Section, Reference Section, Book Bank, Reprographic Section and Digital Library. The Library has more than 1,05,256 Books and 293 Journals and Magazines subscriptions which include National and International. In addition to books and journals, 5 e-journal (744 Numbers) and e-book (6119 Numbers) packages are subscribed. Book Bank facility is also available for SC/ST students. All the back issues of journals and magazines are bound and kept for ready reference. All departments have their own library to cater to the instant reference needs of faculty members. The Library has computerized all its housekeeping operations using in-house development library software that is well maintained and updated regularly. Moreover, NPTEL video and web courses are also available. It uses state-of-the-art technology in its function and services. KSRCT Library is a member of NDLI and DELNET for effective resource sharing.

#### **Library Automation**

The library services are fully automated using In-house Library Management System. All the transactions are fully computerized and all the documents are bar-coded. The bar-coded ID with Scanners is used for charging and discharging the documents

#### WEB OPAC:

Web Online Public Access Catalogue (Web OPAC) has been provided to the user. The user can browse and retrieve the library resources. OPAC module facilitates on the intranet and Internet environment.

**Intranet :** http://10.1.5.8/Library/Book\_Search.asp

**Internet:** http://ctcms.ksrct.net/Library/Book\_Search.asp

Sufficient numbers of systems are available in the **Digital Library Section** with Internet access facility to

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access the e-resources. Users can access for educational, research and development purpose. Non-book materials such as CDs, DVDs, text book tutorial CDs and periodical's CDs are also kept in the Library. NPTEL materials are also available.

File Description	Document	
Upload any additional information	<u>View Document</u>	
Paste Link for additional information	<u>View Document</u>	

# 4.2.2 Institution has access to the following: 1. e-journals 2. e-ShodhSindhu 3. Shodhganga Membership 4. e-books 5. Databases 6. Remote access to e-resources

**Response:** A. Any 4 or more of the above

File Description	Document
Upload any additional information	View Document
Institutional data in prescribed format	View Document
Details of subscriptions like e-journals, e-books, e-ShodhSindhu, Shodhganga Membership etc	<u>View Document</u>

# 4.2.3 Average annual expenditure for purchase of books/ e-books and subscription to journals/e-journals during the last five years (INR in Lakhs)

**Response:** 4.68

# 4.2.3.1 Annual expenditure of purchase of books/e-books and subscription to journals/e- journals year wise during last five years (INR in Lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
0.1	2.29	1.90	0.1	19.01

File Description	Document
Details of annual expenditure for purchase of and subscription to journals/e-journals during the last five years	View Document
Audited statements of accounts	View Document
Any additional information	View Document

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## 4.2.4 Percentage per day usage of library by teachers and students (foot falls and login data for online access) during the latest completed academic year

Response: 35.7

#### 4.2.4.1 Number of teachers and students using library per day over last one year

Response: 1186

File Description	Document
Details of library usage by teachers and students	<u>View Document</u>
Any additional information	View Document

#### 4.3 IT Infrastructure

## **4.3.1** Institution has an IT policy covering wi-fi, cyber security, etc., and allocated budget for updating its IT facilities

#### **Response:**

Yes, Institutions has IT policy

- The Institution has 1420 computer systems with software and the student in the Ratio of 2:1
- The Institution has 22 higher end servers for academic activities
- Every department has its unique computer laboratories with LAN and internet facility
- Institution makes use of open source software and also has licenses for list of software such as Microsoft campus agreement, Oracle 11g, Rational Rose, Qualnet Network Simulator, MatLab, Auto CAD, PRO-E etc..
- The institution is fortified by Gajshield firewall to achieve campus network security
- The institution has high capacity Wi-Fi facility through various access points in the Campus with concurrent access speed of 160 mbps for the faculty and students utility
- The Institution provides online mode of teaching and learning process through MS Platform
- All the systems have been provided with backup through the uninterrupted power supply
- Biometric attendance system is enabled for faculty and staff
- The Institution has 200 surveillance cameras
- The adequate budget has been allocated every year for IT infrastructure
- The Institution provides and maintains an official email to all the faculty and students in the domain name of ksrct.ac.in / ksrct.net

#### **Updating frequency and Nature of Updates**

Wi-Fi facility is updated based on the concurrent users in every year.

#### **Details of Wi-Fi facility**

<b>Upgradation Date</b>	No. of Access points	Locations	

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06.01.2012	03	Main Building, IT Park
10.08.2012	03	Main Library, Mechatronics Block
27.06.2015	04	Main Building Conference Hall, Academic Block
19.10.2015	03	IT Park
21.11.2015	10	Founder Hall, Kanini Karutharangam,
02.09.2016	04	Academic Block, 1st year Hostel, Internet Laboratory, New Hostel
04.08.2017	01	Staff Quarters
22.08.2018	01	NST Block
16.07.2019	02	PTC block
11.12.2020	01	IT Park
10.12.2021	01	Cyber Dome
23.12.2021	03	New Boys Hostel II

Internet Provider: M/s Pink Broadband Service Private Limited, Salem

#### IT Infrastructure

- Internet connectivity is upgraded from 120Mbps to 160 Mbps
- A.Y 2019-2020: 210 computers were upgraded with Intel Core i5 processor 8GB RAM 500GB HDD, 2 new servers were purchased,1 server of 96 GB RAM, 10 TB HDD, and 1 server with 8 GB RAM, 3 TB HDD
- Academic Year 2018-19: RAM capacity of the 1 server system was upgraded from 4 GB to 8 GB
- A firewall "Gajshield" is installed for the security of the campus network with filtering features.
- Cable structure is Star Extended Topology with fiber backbone connectivity and speed is 1 Gigabyte
- The entire Campus is linked with fiber optic network which helps to access the resources provided by the Institution
- K7 antivirus software has been installed for all the systems
- Biometric attendance system for Faculty and Staff
- The Institution has unique Test server for online evaluation of the student performance in training and placement activities
- Laboratory automation (Programming Skill Development System) has been introduced through which students can practice and solve programming problems from anywhere, any time in and outside the KSRCT campus and it is used to assess the coding efficiency

File Description	Document
Upload any additional information	<u>View Document</u>
Paste link for additional information	View Document

#### 4.3.2 Student - Computer ratio (Data for the latest completed academic year)

Response: 2:1

File Description	Document
Upload any additional information	View Document
Student - computer ratio	View Document

#### 4.3.3 Bandwidth of internet connection in the Institution.

**Response:** ?50 MBPS

File Description	Document
Upload any additional information	View Document
Details of available bandwidth of internet connection in the Institution	View Document

#### 4.3.4 Institution has the following Facilities for e-content development

- 1. Media centre
- 2. Audio visual centre
- 3. Lecture Capturing System(LCS)
- 4. Mixing equipments and softwares for editing

**Response:** D. 1 of the above

File Description	Document
Upload Additional information	<u>View Document</u>
Institutional data in prescribed format	View Document
Link for Additional information	View Document

#### 4.4 Maintenance of Campus Infrastructure

4.4.1 Average percentage expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component during the last five years

Response: 95.45

4.4.1.1 Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component year wise during the last five years (INR in lakhs)

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2020-21	2019-20	2018-19	2017-18	2016-17
504.38	634.07	762.53	890.86	931.03

File Description	Document
Upload any additional information	View Document
Details about assigned budget and expenditure on physical facilities and academic facilities	View Document
Audited statements of accounts	View Document

## 4.4.2 There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc.

#### **Response:**

KSRCT has established systems and procedures for maintaining and utilizing physical, academic and support facilities such as laboratory, computer, classroom, sports complex, etc., The maintenance of physical, academic and support facilities are carried out by the respective departments with the help of the estate officer / housekeeping staff on daily basis and periodically. Necessary care has been taken to keep the equipment, machines in the working condition. In case of breakdowns, standard procedure is followed to bring the equipment/machine in working condition. Supervisors and technicians are appointed to monitor and maintain the housekeeping and physical facilities. Description on maintenance and utilization of some facilities are as follows:

#### Laboratories

Laboratories are operated and maintained by well-qualified and skilled technical staff. AMC is in place for certain equipment and ensure the renewal as per the schedule. Interested students can utilize the lab facilities beyond the working hours for practice, project and research activities. To ensure the same log / entry register is maintained to monitor the usage of the equipment in all the laboratories. The repair and servicing of equipment are carried out after obtaining statutory approval of the Head of the Department concerned, the Principal, and the Management. The lab in-charge and the faculty concerned to ensure proper utilization of the laboratory premises and instruments/equipment. Hence, uninterrupted usage can be ensured by the students and faculty for the better learning.

#### Library

The Library is headed by the Librarian who supervises the maintenance and utilization of the premises and all the books, journals and magazines etc. The library staff maintains books in the lending as well as reference sections, stacked in catalogued racks segregated branch wise. The Library remains open from 8.00 am to 8.00 pm on all working days and 9.00am to 5.00pm on weekends and holidays. New books and journals (National & International) are procured by obtaining periodical requirement from HoDs, Faculty, students and Library committee. The issue and return of the borrowed books are maintained by the library

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software and the Library housekeeping operations have been computerised using in house development library software. Remote access of online content is made available to all the faculty and students. The subscription and renewal of the online journals are undertaken and looked after by the librarian and the library committee for each academic year. The faculty and students are encouraged for effective and efficient use of library facility by honouring them with the Best Library User Award. To enhance the self learning, resources available in Digital library such as online journals, CD packages and domain specific study materials in the NDLI websites help students in upgrading their knowledge. GATE forum and Career Guidance Academy (CGA) organise many orientation programmes on higher studies and cracking competitive examinations by inviting subject matter experts both physically and virtually.

#### **Sports Complex**

The Institution is accommodated with necessary play fields for various indoor & outdoor games. The Department of Physical Education functions under the able guidance of a Physical Director, Assistant Physical Director, Physical Directress, Gym instructor and Ground Markers. The Physical Director monitors the maintenance and utilization of the sports premises as well as all sporting items/equipment, grounds, etc. List of sporting items, equipment, etc. are maintained in stock registers. The issue and return of sporting items are supervised by the Physical Director and his support staff. Service, repair of sporting premises and/or equipment/items are carried out as per the due standard procedures, with the approval of the Principal and the Management. The department provides systematic training and coaching for players in various sports and games. The Institution organizes annual sports meet and encourages the students to participate in the Intra and Inter Collegiate events and provides platform to flourish in all games to bring out laurels to the Institution. The periodical maintenance of Basketball and Volley ball Court, Athletic tracks and Cricket field are taken care of by the ground markers and supporting staff. The wooden flooring of indoor stadium is properly sealed and varnished with luminous flood lighting.

#### **Central Computer Facility**

In the digital era, the computing facility of the institution is to be taken utmost care. The Institution has 200 surveillance cameras. The institution is fortified by Gajshield firewall to achieve campus network security. The Central Computer Centre (IT Park) remains open from 9 am to 6.30 pm where students can walk in and access their needs of study. The system manager manages all the activities related to the computer systems and networking. He takes care of the maintenance of computer system, networking, provision of LAN connectivity and prepares schedules for providing computer service to all. Complaints/grievances about systems and/or peripherals are raised by faculty members and routed through their respective heads of the department to the system administrator through the Principal for necessary action. However, the procurement of new systems is carried out only after the approval of the Principal and the Management based on the requirements of all the departments. The Institution has high speed internet connectivity and Wi-Fi facility with high bandwidth to download study materials made accessible to both members of faculty and students. Firewall, Antivirus, Microsoft campus manager renewal process to ensure the secure environment and authenticate usage.

#### **Class rooms and Seminar Halls**

All the classrooms, seminar halls, auditoriums, etc. are ICT enabled and maintained under the supervision of the Estate Officer. Periodical cleaning of the classrooms and seminar halls are taken care of by the house keeping staff and record chart is maintained. All works related to periodic inspection, maintenance and repairs are carried out by the Estate Officer and his team of technicians and housekeeping staff. Proper

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utilization of teaching premises is ensured by all the faculty members as per standard norms. The provisions like AV equipment, ICT equipment, A/C and Furniture are maintained periodically by the appropriate technical staff

File Description		Document
	Upload any additional information	View Document
	Paste link for additional information	View Document



#### **Criterion 5 - Student Support and Progression**

#### 5.1 Student Support

5.1.1 Average percentage of students benefited by scholarships and freeships provided by the Government during last five years

Response: 50.58

5.1.1.1 Number of students benefited by scholarships and free ships provided by the institution, Government and non-government bodies, industries, individuals, philanthropists during the last five years (other than students receiving scholarships under the government schemes for reserved categories)

2020-21	2019-20	2018-19	2017-18	2016-17
1400	1572	1910	2330	2621

File Description	Document
upload self attested letter with the list of students sanctioned scholarships	View Document
Upload any additional information	<u>View Document</u>
Institutional data in prescribed format	View Document
Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years	View Document

5.1.2 Average percentage of students benefited by scholarships, freeships, etc. provided by the institution and non-government agencies during the last five years

Response: 9.04

5.1.2.1 Number of students benefited by scholarships and free ships provided by the institution, Government and non-government bodies, industries, individuals, philanthropists during the last five years (other than students receiving scholarships under the government schemes for reserved categories)

2020-21	2019-20	2018-19	2017-18	2016-17
469	314	286	340	212

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File Description	Document
Upload any additional information	<u>View Document</u>
Number of students benefited by scholarships and freeships besides government schemes in last 5 years	View Document
Institutional data in prescribed format	View Document

# 5.1.3 Following Capacity development and skills enhancement activities are organised for improving students capability 1. Soft skills 2. Language and communication skills 3. Life skills (Yoga, physical fitness, health and hygiene) 4. Awareness of trends in technology

**Response:** A. All of the above

File Description	Document	
Details of capability enhancement and development schemes	View Document	
Any additional information	View Document	
Link to Institutional website	View Document	

## 5.1.4 Average percentage of students benefited by career counseling and guidance for competitive examinations as offered by the Institution during the last five years.

**Response:** 100.23

## 5.1.4.1 Number of students benefitted by guidance for competitive examinations and career counselling offered by the institution year wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
3336	3854	3649	3629	4387

File Description	Document
Number of students benefited by guidance for competitive examinations and career counselling during the last five years	View Document
Any additional information	View Document

## 5.1.5 The institution adopts the following for redressal of student grievances including sexual harassment and ragging cases 1. Implementation of guidelines of statutory/regulatory bodies

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- 2. Organisation wide awareness and undertakings on policies with zero tolerance
- 3. Mechanisms for submission of online/offline students' grievances
- 4. Timely redressal of the grievances through appropriate committees

**Response:** A. All of the above

File Description	Document
Upload any additional information	<u>View Document</u>
Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee	View Document
Details of student grievances including sexual harassment and ragging cases	View Document

#### 5.2 Student Progression

#### 5.2.1 Average percentage of placement of outgoing students during the last five years

Response: 79.32

#### 5.2.1.1 Number of outgoing students placed year - wise during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
694	724	982	1182	1247

File Description	Document
Self attested list of students placed	<u>View Document</u>
Details of student placement during the last five years	View Document

#### 5.2.2 Percentage of student progression to higher education (previous graduating batch).

Response: 6.71

5.2.2.1 Number of outgoing student progressing to higher education.

Response: 64

File Description	Document
Upload supporting data for student/alumni	View Document
Details of student progression to higher education	View Document

5.2.3 Average percentage of students qualifying in state/national/international level examinations during the last five years (eg: IIT-JAM/CLAT/ NET/SLET/GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/State government examinations, etc.)

Response: 64.28

# 5.2.3.1 Number of students qualifying in state/ national/ international level examinations (eg: IIT/JAM/ NET/ SLET/ GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/ State government examinations, *etc.*)) year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
15	16	17	37	51

# 5.2.3.2 Number of students appearing in state/ national/ international level examinations (eg: IIT/JAM/ NET / SLET/ GATE/ GMAT/CAT,GRE/ TOEFL/ Civil Services/ State government examinations) year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
23	32	32	45	72

File Description	Document
Upload supporting data for student/alumni	View Document
Number of students qualifying in state/ national/ international level examinations during the last five years	View Document

#### **5.3 Student Participation and Activities**

5.3.1 Number of awards/medals won by students for outstanding performance in sports/cultural activities at inter-university/state/national / international level (award for a team event should be counted as one) during the last five years.

Response: 164

# 5.3.1.1 Number of awards/medals won by students for outstanding performance in sports / cultural activities at inter-university / state / national / international events (award for a team event should be counted as one) year - wise during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
09	30	52	43	30

File Description	Document
Number of awards/medals for outstanding performance in sports/ cultural activities at interuniversity / state / national / international level during the last five years	View Document
e-copies of award letters and certificates	<u>View Document</u>
Any additional information	View Document

## 5.3.2 Presence of an active Student Council & representation of students on academic & administrative bodies/committees of the institution

#### **Response:**

The Institution opens its diverse platforms to students of different branches and different years. Their representation in planning, decision making, and administrative committee hone their leadership skills and nurture their potential to the fullest for personal and collective growth and development. The empowerment in the above three crucial roles sets them on a path to excellence and the academic ambience is conducive to the all-round growth of students. The joint efforts of students, faculty, staff and management add momentum to the Institution's growth. The students' representatives are spread across various cells, clubs and committees and work in close association with the Institution association's core and disciplinary committees. Student involvement in the Department Advisory Committee increases their responsibilities in the developmental measures of the department and that of the Institution. Their participation in Class Committee Meeting, Grievance Redressal Cell with Internal Complaint Cell, Anti-Sexual Harassment, Anti-ragging committees Minority, SC/ST Cell guarantees them viable platforms to address and solve their personal issues amicably.

The Internal Complaint Cell and the Anti-Sexual Harassment Cell are vigilant in sensing gender menace in any form and are quick to adopt practical measures in gender sensitization and abolishment of sexual harassment. They host awareness sessions on prohibiting, preventing and banning raging menace on and off campus in line with AICTE and UGC regulations, Supreme Court directives and State acts. The Hostel and Canteen Committee monitor the quality and hygiene aspects of food and invite feedback from peers The transport team ensures safe commuting to and from the Institution.

The vibrant student participation in Professional Bodies -ISTE, IE(I), IEEE EMBS, PALS, Alumni Association, Communication Skills Club, Training and Placement & Higher Studies empower them to be

job-ready through their intensive career development programmes. The library committee, Readers' Club and NDLI Club help in character building and healthy habit formation in absorbing the core values of life and education. Their involvement in newsletter preparation, Library, Readers' Club and NDLI activities also gives them skills in event management, and public speaking.

Cultural Committee and Sports Committee cater to their personal values like leadership, comradeship, sportsmanship and celebration of togetherness. Training and Placement Cell empowers them on a regular basis to be job-ready through their intensive career development programmes. R&D, IIC, Start-up Cell, Idea Lab Product Development and IPR imbibe in them reflection, research and reference competencies, and, sharpen their abilities by tuning themselves for career and life. The Unnat Bharat Abhiyan, Women Empowerment Cell, Green Club, PAC Club, and NSS units inculcate in them social responsibility, ethical values and service in improving the social and economic well-being of the neighboring rural communities. The Swachh Bharat Committee holds regular cleanliness drives in and around the Instituion. The student members of all these bodies work in collaboration with the respective faculty teams for the holistic health of the academic and the civic community in and around the campus vicinity.

File Description	Document
Upload any additional information	View Document
Paste link for Additional Information	View Document

## 5.3.3 Average number of sports and cultural events / competitions organised by the institution per year

Response: 44

## 5.3.3.1 Number of sports and cultural events / competitions organised by the institution year - wise during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
29	37	59	55	40

File Description	Document
Upload any additional information	View Document
Report of the event	View Document
Number of sports and cultural events / competitions organised per year	View Document

#### **5.4 Alumni Engagement**

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## 5.4.1 The Alumni Association / Chapters (registered and functional) contributes significantly to the development of the institution through financial and other support services.

#### **Response:**

under Tamil Nadu Societies Registration Act, 1975. All graduates are requested to become the members of alumni association. The main objective of the Association is to bridge the gap between the Institution and alumni. This association cultivates a strong bondage between the Institution, students and the alumni. It facilitates the students and Institution to know about the technological innovation, Academic curriculum, Entrepreneurship development and mentoring the current students as well. More over alumni are part of Board of Studies, Academic Council, Governing Council, and frequently invited as chief guest for the department events too. The office bearers of the Alumni association are elected once in every three years. Two executive committee meetings held on an average, every year and future plans were discussed. It is planned to have annual alumnimeet in the month of December every year. Alumni meet is a formal function which involves reunion, games, future plans, adding local chapters, alumni interaction with students, cultural programs by present batch of students followed by lunch.

- Alumni entrepreneur also has their lion's share in uplifting our Institution. They come forward to sign MoU, organize seminars, workshops with institutions, provide job offers and equip student with the tech and world stuff.
- It is not only the corporate that fetches us the placement record it's also our alumni who multiplies the placement record.
- Alumni also contribute to the development of institution by taking part as an active member in the board of studies elevating the curricula and syllabi as required in the global platform.
- Alumni take part in the invited talk and share their knowledge and experiences to the student. In this forum the students are allowed to interact with the alumni to foster the rapport between the current student and old student.
- KSRCT offers "One student, one Alumni" alumni mentoring program. This gives the opportunity for the students to have rich exposure.
- As a last note, the main objective of this council is to develop Skilled KSRCTians as the nation marches towards "SKILLED INDIA". Institution join hands with the movement by creating skilled KSRCTians.
- Some of the Alumni are employed as faculty in the Institution. They play an important role in academic and institutional development.
- Every year we conduct Alumni Induction day for current final year student in the month of March and also provide the alumni mementos.
- Each alumnus contributes Rs.500/- towards membership of Alumni association which is used for providing financial support to the students.
- Alumni also contribute Alumni Help Fund for financially weaker students
- The alumni also contribute to Institution towards development apart from Membership Fee.The Alumni has contributed Rs.13,34,938/- to the Institution in the last 5 years

File Description	Document
Any additional information	<u>View Document</u>
Link for additional information	View Document

# 5.4.2 Alumni financial contribution during the last five years (in INR). Response: B. 10 Lakhs - 15 Lakhs File Description Document Any additional information View Document Link for additional information View Document

#### Criterion 6 - Governance, Leadership and Management

#### 6.1 Institutional Vision and Leadership

6.1.1 The governance of the institution is reflective of an effective leadership in tune with the vision and mission of the Institution

#### **Response:**

#### Vision

To produce the most competent Scientists, Engineers, Technologists, Entrepreneurs, Managers and Researchers through quality Education.

#### Mission

To achieve academic excellence in Science, Engineering, Technology, Management and Research through objective and innovative teaching methods; dedicated and duty conscious faculty; continual and consistent updation of facilities; welfare and quality improvement of the faculty and a system of continual process improvement.

#### **Nature of Governance**

The institution follows an autonomous and participatory mode of governance with all stakeholders actively in its administration. The Governing Body delegates authority to the Chairman, the Vice Chairman, the Secretary and the Principal. The Principal shares it with the Deans, Director, Heads of various Departments, Administrative Officer, Coordinators of various cells, and Conveners of various Committees in the Institution. IQAC of the Institution plays a key role in the preparation of the Strategic Plan of the Institution by consolidating the goals and objective of every Department and Cell/Club.

#### Perspective plan

The Management is assisted by Governing Council of the Institution, which takes over the planning and execution of various domains. The action plans are formulated in line with quality policy under the leadership of the Principal and the same are incorporated into strategic plans for effective implementation. The policy statements and action plans are tuned up for attaining the Mission of the Institution. Meetings with stake holders like parents, alumni and employers are conducted periodically to receive their feedback for implementing some of the action plans in line with progress of the Institution. All aspects of the teaching, learning and evaluation process are assessed through regular course co-ordinators, module co-ordinators, programme co-ordinators, board of studies and academic council meetings.

#### Participation of the faculty

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The Principal, the Vice-principal, Deans, Directors, HoDs and senior faculty members plays key role in framing various policies and principles for proper academic, administrative and financial management of the Institution. Selective faculty members have been nominated as the members of Governing Council, Academic Council and BoS Committee of the Institution.

The Principal conducts periodic meetings with the Vice Principal, Deans, Directors, HoDs and coordinators of various Institutional committee to review outcomes from the implementation of action plans and make necessary changes in the action plans, if required. The minutes of meetings of the Principal with HoDs bearing the decisions taken and plans made at the administrative level and the role of the individual in implementing the quality policy are circulated to the faculty members for effective implementation. The HoDs disseminate such action plans and get feedback from the faculty members through department meetings.

Faculty are designated as programme coordinator, module co-ordinator and course co-ordinator at departmental level for monitoring continuous improvement in outcome-based education. Programme coordinator conducts periodic meetings with the module coordinators to ensure the effective implementation of outcome based education.

Faculty are also deputed as class advisors, time table co-ordinators, BoS co-ordinators, exam co-ordinators, T&P co-ordinators, R&D co-ordinators, academic auditor, Institute Innovations Council Member, ICT Academy co-ordinators, budget co-ordinators, lab in-charges and co-ordinators of various cells/ clubs/professional bodies.

File Description	Document
Any additional information	View Document
Link for additional information	View Document

## 6.1.2 The effective leadership is reflected in various institutional practices such as decentralization and participative management.

#### **Response:**

The Institution is keen in promoting a culture of decentralized governance system for its growth. The Head of the Institution is empowered with full autonomy for overall monitoring of administrative and academic activities to cater to the Institution's Vision and Mission. The roles and responsibilities of decentralized administrator's /decision makers are listed below:

#### **Administrative Autonomy**

Administrative autonomy is decentralized to the Vice-Principal, Deans, Directors, HoDs, Administrative Officer, various Cell Coordinators as shown below for better governance.

#### **IQAC** Autonomy

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IQAC Coordinator has the autonomy to make modification / implement / channelize and systematize the efforts and measures towards academic excellence.

#### **Financial Autonomy**

Financial committee constituted by the Principal is given full autonomy to take decisions related to planning, implementation, and management of all the financial resources. It reviews the funding pattern, provides guidelines and strategies for mobilizing resources to support the implementation of the Institutions strategic plan, and the fulfilment of its vision and mission.

#### **Academic Autonomy**

The Board of Studies (BOS), the Academic Council and the Department Advisory Boards are given the power to design, implement, monitor and evaluate academic activities. Autonomous section has the freedom to decide on academic matters like curricula, syllabi and their quality assurance.

#### **Examination Autonomy**

Controller of Examinations is responsible for the announcement of Examination Time Table, Preparation of Question Papers, Conduct of End Semester Theory and Practical Examinations, Evaluation of Answer Scripts, Declaration of results and Issuing of Grade Sheets. CoE has the autonomy to recommend the list of qualified students to the Anna University for the award of the Degree.

#### **Student Autonomy**

Students are assigned individual responsibility like Class representatives, Class committee members, Cell co-ordinators and representatives of various college events. They are given full power to discuss/ put forth the requirements/ suggestions in the meeting.

#### Case study on decentralization and participative management

KSRCT follows a decentralized approach in financial management. At the department level, budget coordinator analyse the requirements for teaching, learning, research and outreach activities and prepare the budget. Budgets are then consolidated and forwarded to the Financial Committee with the approval of the HoD concerned.

In case of purchase of equipment's/ consumable, concerned faculty must submit a detailed proposal to the Purchase committee through respective heads. Purchase committee analyses the proposal and make recommendations based on merit of the case. Once approved by the committee, purchase can be initiated as per the financial power of the authority listed below,

The detail of financial powers to be exercised by the Principal

- Purchase on lowest quotation basis Rs.2,00,000/-
- Lower of two/ higher quotation basis Rs.50,000/-
- Emergent purchase without quotation Rs.50,000/-

All the Heads of the Departments

- Rs. 3,000/- (without quotation)
- Up to Rs.25,000/- (on lowest quotation)

Beyond Rs.2,00,000/-, Management approval is required to initiate the purchase process.

The Institution promotes the culture of participative management at all levels, which facilitate the faculty and students to give their view and suggestions to improve the quality of planning and implementation in all possible means.

File Description	Document
Any additional informatiom	View Document
Link for strategic plan and deployment documents on the website	View Document
Link for additional information	View Document

#### **6.2 Strategy Development and Deployment**

#### 6.2.1 The institutional Strategic / Perspective plan is effectively deployed

#### **Response:**

#### **Smart / Digital Campus with effective e-Governance**

In line with the Institutions strategic plan, KSRCT successfully implemented effective e-governance system with internal software and web development team to enable smooth transition from manual process to digital campus.

KSRCT CMS is an indigenously developed web portal to govern and maintain the day-to-day academic activities of the Institution. Meanwhile, Programming Skill Development System (DigiPro) is an in-house web Integrated Development Environment (IDE) to facilitate programming skillset of students.

,		
Section	Features	
KSRCT CMS - h	ttp://www.ctcms.ksrct.net/	
Student	Student Profile, Attendance, Assignment/ Tutorial and Test Marks, Lab Marks, Inter	
	Semester Result, Feedback, Bonafide Certificate	
Faculty	Faculty Profile, Biometric Attendance, Salary Receipt, Exam Duty, Assignment/ Tutor	
	Mark Entry, Students Attendance Marking – OD, Leave, Permission	
Academic	e-Circular, Academic Schedule, Internal Marks Generation, Subject Allocation,	
	Proforma, SMS to Parents, Result Analysis	
Library	OPAC, Book Reservation, e-Gate, Online Research repository, e-Contents, Question Ba	
Exam	Seating Arrangement, Result publication	
CAMPUSRANN	- https://ctplacement.ksrctdigipro.in/	
Placement	Students & Company Database, SMS/e-mail Triggering	
<b>DigiPro -</b> https://k	srctdigipro.in/	

Programming	C, C++, Java, Python, PHP, Perl, SQL, HTML, JavaScript, JQuery		
Evaluation	Test cases passed, Logic used, Time taken, Compilation count and space used		count and space used
Exam	Quiz, Online Proctori	- Live / Automated	
File Description		Document	
Any additional information		View Document	
Link for Strategic Plan and deployment documents on the website		View Document	
Link for additional info	ormation	View Document	

## 6.2.2 The functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment, service rules and procedures, etc.

#### **Response:**

#### **Functioning of the various institutional bodies**

To achieve the goals and objectives of higher education, the Institution has a systematic policies and procedure of administration with constituted institutional bodies of which the Governing Body is highly authoritative. The president of the Society is the Chairman of constituted Governing Body Council as per norms. The Principal is the ex officio secretary of the Governing Body. He is the academic and administrative head of the institution and holds power to access and intervene as decisive authority of the administrative and academic councils.

#### Administrative set-up

The academic administration is preceded by the Vice-Principal, Deans and Directors of the domain disciplines and followed by the Heads of the various department. Wherein all the Institutional matters are discussed with this composition before implementation for their instinct, guidelines and ensure the preparedness in dealing the same. Heads take charge and handle on their academic staff, non-teaching staff and students for any matter and takes the message to their higher official, namely the Directors or Deans

#### **Academic Bodies**

The Academic Council followed by autonomous and Board of studies statutory takes essential monitoring on the curriculum matters like Programme to be implemented, courses to be included, syllabi improvisation and all amendments related to National policies for education are recommended in the BoS meeting of the various department.

#### Other institutional bodies

The Institution has a good strategically framed members on the board for all other essential statutory committees that take decisions and execute them with the help of members of non – statutory committees. The management has been extending its unfailing support to meet all the requirements in terms of human resources, financial management and infrastructure development.

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#### **Appointment procedures**

Appointments are made based on the needs to run the Institution efficiently as well as to meet the AICTE student: staff ratio. The Institute has never failed to meet the minimal ratio and always have higher benchmark for quality educational needs with exceeding faculty/ student ratio.

Recruitment advertisements in the website, social media and newspapers were released and upon deadline the heads and scrutiny team take charge in selecting the candidate for the interview either by physical or virtual mode based on the situations. Selection committee consists of the Principal, Dean/HoD, domain expert to confirm the selection. Post selection, which will be intimated to candidate to proceed the acceptance of the offer.

#### **Service procedures**

The service rules are framed by the Principal as per the AICTE norms in consultation with the Management and approved by the Governing Body. The service rules are made available in the Institutional website. The faculty shall conduct Lecture, Lab, Tutorial, Seminars and attend all other academic, co-curricular and extracurricular activities assigned to him/her and to the best satisfaction of the students and superiors. Also, the faculty shall work with fullest co-operation with others in the departments ensuring excellent working atmosphere. Promotion to a higher cadre depends on experience, teaching, research and satisfactory academic and related activities in the Institution

File Description	Document
Any additional information	View Document
Link to Organogram of the Institution webpage	View Document
Link for additional information	View Document

#### 6.2.3 Implementation of e-governance in areas of operation

- 1. Administration
- 2. Finance and Accounts
- 3. Student Admission and Support
- 4. Examination

**Response:** A. All of the above

File Description	Document
Screen shots of user interfaces	<u>View Document</u>
Institutional data in prescribed format	View Document
ERP (Enterprise Resource Planning) Document	View Document
Any additional information	View Document
Link for additional information	View Document

#### **6.3 Faculty Empowerment Strategies**

## 6.3.1 The institution has effective welfare measures for teaching and non-teaching staff and avenues for career development/ progression

#### **Response:**

The Institution strongly believes that the state of wholesome health and wealth of employees can reflect in their work efficiency and dedication. Hence, the Institution has taken up immense responsibility on taking care of their well-being and created possibilities for both the teaching and non-teaching staff.

#### Health

- Faculty members and non-teaching staff avail medical facilities for both general and dental health in the Dental College Hospital.
- All the members of faculty and supporting staff were provided with group insurance facilities to support them at needy time.
- Yoga and meditation classes are conducted to enrich their mental and physical health.
- Special in-house camps are conducted often considering their health perspective (Cancer screening, General health check-up and vaccination)
- Female staff and faculty can avail maternity leave for a period of six months

#### **Avenues**

- Faculty members were provided with congenial work environment
- Faculty members were given free transportation facilities
- Free accommodation and food with subsidized cost is provided to both teaching and non-teaching staff of the institution in the hostels
- Faculty / staff also can avail quarters constructed within the campus
- Providing infrastructural facilities for doing research and consultancy
- Faculty members and staff working hours are as per the norms; library staff members are working in shifts since the library is opening from 8.00 am to 8.00 pm
- Summer and Winter Vacations for faculty and staff members
- Amenities like canteen, gym, post office, swimming pool, bank & ATM, RO water, stationary store are available inside the campus

#### Wealth

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- Faculty / staff can avail salary advance if any necessity arises
- The Institution follows the pay band as per the norms and revise them at every stage of their career growth in terms of experience, contribution, skills and responsibilities.
- The Institution is also facilitating its employees to avail loan from Provident Fund and gives reference to avail loan from the salary credited bank for their needy
- The Institution has special provision for incentives on receipt of external funded projects
- Once in a year the Institution is sponsoring for tours to faculty members in all the department to rejuvenate their energy through the Staff Club
- Every year during Sports Day celebrations separate events were conducted for faculty members both for men and women and rewarded with prizes.
- Faculty and staff can avail 25% fees concession for their children in the school and college run by the management.
- Financial support to "COVID-19" victim
- Seed money provided for faculties to encourage them to undertake research projects
- Special allowance of Rs.10,000/- provided to the faculty with Ph.D. qualification.

#### Career development

- The Institution provides On Duty and financial support to faculty and supporting staff undergoing training programmes, attend seminars, symposia, conferences, workshops at national and international level.
- Providing meritorious awards.
- Supporting staff are given training in the basic computer operations and Microsoft Office products at periodic intervals.

File Description	Document
Any additional information	View Document
Any additional information	View Document
Link for additional information	View Document

## 6.3.2 Average percentage of teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the last five years.

Response: 81.32

## 6.3.2.1 Number of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies year wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
246	300	306	341	348

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File Description	Document
Institutional data in prescribed format	<u>View Document</u>
Any additional information	View Document
Link for additional information	View Document

6.3.3 Average number of professional development / administrative training Programmes organized by the institution for teaching and non-teaching staff during the last five years.

Response: 20.2

## 6.3.3.1 Total number of professional development /administrative training Programmes organized by the institution for teaching and non teaching staff year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
36	17	14	15	19

File Description	Document
Reports of the Human Resource Development Centres (UGC ASC or other relevant centres).	View Document
Reports of Academic Staff College or similar centers	View Document
Institutional data in prescribed format	View Document

6.3.4 Average percentage of teachers undergoing online/ face-to-face Faculty Development Programmes (FDP)during the last five years (Professional Development Programmes, Orientation / Induction Programmes, Refresher Course, Short Term Course ).

**Response:** 116.69

# 6.3.4.1 Total number of teachers attending professional development Programmes, viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes year wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
544	441	471	240	454

File Description	Document
Reports of the Human Resource Development Centres (UGC ASC or other relevant centers)	View Document
IQAC report summary	View Document
Institutional data in prescribed format	View Document

#### 6.4 Financial Management and Resource Mobilization

#### 6.4.1 Institution conducts internal and external financial audits regularly

#### **Response:**

The Institution has established a mechanism for conducting internal and external audits on the financial transactions every year to ensure financial compliance. KSRCT follows all statutory requirements for audits and accounting practices. Internal audit is conducted half yearly by the internal financial committee of the institution. The committee thoroughly verifies the income and expenditure details and the compliance report of internal audit is submitted to the Management of the Institution through the Head of the Institution. External audit is conducted once in every year by an external agency.

#### Process of the internal audit

All vouchers are audited by an internal financial committee on half yearly basis. The expenses incurred under different heads are thoroughly checked by verifying the bills and vouchers. If any discrepancy is found, the same should be brought to the notice of the Head of the Institution.

#### Process of the external audit

The accounts of the Institution are audited by chartered accountant regularly as per the government rules. The Institution has appointed statutory external auditor M/s.T.V.Venkatraman and Associates (M. No. 8925) to audit the accounts. External auditors audit the accounts once in a year. Any discrepancies during the audit will be discussed and sorted out with the supporting documents.

#### **Audit procedures**

- 1. Source of Income Verification
  - Auditor will cross verify the fee collections and scholarships with approved list of students
  - Other incomes cross verified with the receipts issued to the students.
  - Fee amount receivable and amount received will be reconciled.
  - Checking Grants received if any.
- 2. Expenses Vouching
  - Auditor will vouch payment (recurring and Non-recurring) with the approved supporting document.
  - Correctness of revenue classification and capital expenses.

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- Reconciliation of bank accounts and checking the bank confirmations.
- Calculation of depreciation of fixed assets.
- Status of the old debit/ credit balances.
- Salaries payments with the salary statements.
- Checking of statutory dues payment like PF, TDS, and ESI
- Any other statutory compliances verification required as per Income Tax Act.
- 3. Any queries, in the process of audit would be attended immediately along with the supporting documents.
- 4. Once all financial transactions are accounted, balance sheet, Income and expenditure statement for the financial year will be prepared.
- 5. Based on the audited financial statements, auditor will issue the Audit Report

#### Mechanism for settling audit objections

During audit, the queries raised by the chartered accountant are addressed by the finance committee and sorted out. Explanation to the queries has to be given within 15 days' time and rectification entries in next 10 days. Auditor reviews the audited financials, and after discussion with the Management, signs the financials before filing returns with the Department of Income Tax.

The Institution have not come across with any major audit objection during the preceding years. However, areas of improvement are suggested by the auditor for implementation in the subsequent year. Typical suggestions that were discussed in the preceding years are:

- Expenditure over Income
- Cost optimization
- Too much unexpected expense need to be avoided
- Avoid cash dealing
- Purchase without approval of Purchase Committee

File Description	Document
Any additional information	<u>View Document</u>
Link for additional information	View Document

## 6.4.2 Funds / Grants received from non-government bodies, individuals, philanthropists during the last five years (not covered in Criterion III and V) (INR in Lakhs)

#### Response: 0

## 6.4.2.1 Total Grants received from non-government bodies, individuals, Philanthropers year-wise during the last five years (INR in Lakhs)

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2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	0

File Description	Document
Institutional data in prescribed format	View Document

#### 6.4.3 Institutional strategies for mobilisation of funds and the optimal utilisation of resources

#### **Response:**

The Institution has well-defined financial structure to ensure effective and optimal utilization of resources for academic, administrative, development and maintenance purposes.

#### Finance committee

The master key for taking financial decision and related matter are the Finance Committee and the Governing Council. Financial Committee is nominated by the Principal has sole responsibility for planning, implementing, and managing all the financial resources. It reviews the funding pattern, provides guidelines and strategies for mobilizing resources to support the implementation of the Institutions strategic plan, and the fulfilment of its Vision and Mission.

#### **Fund mobilization**

Broadly, major internal resource mobilization is in the form of Academic Receipts (Admission fee, tuition fee, examination fee, etc.,). Meanwhile, the external sources of finance are research grants, scholarships, consultancy, revenue collection in the form of deposits (loans from banks) etc., In some cases, funds are raised from academic people, philanthropist, alumni and public through fundraising mechanism to meet expenses related to seminars, workshops, conferences, marathon and social cause.

#### **Fund raising**

It is obvious that each activity/ every person involved in fund raising activity on behalf of the Institution should obtain written permission from the Head of the Institution. In all cases, funds must be collected through Cash/ Cheque/ Demand Draft in favour of The Principal, K.S.Rangasamy College of Technology, Tiruchengode or by online transfer to the official account of the Principal.

#### **Fund allocation**

During the budget preparation, all the academic, department heads and various cell in-charges are requested to provide the annual budget requirements keeping in view of development and updating of laboratories, consumables, computing facilities, library, teaching-learning process, training, extension activities, software and etc., Finance committee will meet to deliberate the proposal and makes necessary changes for proper balance of receipts and expenditure. Also, committee ensures optimum utilization of available financial resources.

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#### Fund utilization

Financial Committee keeps track of the budget throughout the year and confirms adequate resources are spent for teaching-learning practices, salary and wages, library facilities, outreach activities, day-to day operational and administrative expenses, maintenance charges, purchase /up-gradation of laboratories equipment, etc., Optimum utilization of fund for purchase is ensured by the Planning and Purchase Committee. In any unforeseen circumstances, additional budget is allotted depending on the merit of the case.

#### **Audits**

Internal and external audit are carried out promptly and audit objection are taken care of.

#### Optimal utilization of funds is ensured by

- Allocating adequate funds for effective teaching-learning practices including conduct of FDPs, orientation programs, workshops, conferences, inter-disciplinary activities, and consistent upgradation of laboratories, R&D, library and sports facilities.
- Effectively utilizing the grants received from external funding agencies and procuring state-of-theart equipment for project implementation. It can be utilized by the students and faculty for R&D and product development.
- Utilizing funds to meet day-to-day operational and administrative expenses and maintenance of the fixed assets.
- Providing adequate funds for development and maintenance of infrastructure.
- Allocating sufficient funds for social service activities as a part of ISR.

Experience in budget utilization during past years helps out in efficient budgeting and optimal utilization of the financial resources.

File Description	Document	
Any additional information	View Document	
Link for additional information	View Document	

#### 6.5 Internal Quality Assurance System

6.5.1 Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes visible in terms of – Incremental improvements made for the preceding five years with regard to quality (in case of first cycle) Incremental improvements made for the preceding five years with regard to quality and post accreditation quality initiatives (second and subsequent cycles)

#### **Response:**

**Digital Assisted Language Learning System (DALLS)** 

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The Institution caters to the educational needs of the students hailing from rural areas. It is a known fact that the rural students face difficulty in the interpersonal communication and lacks in expressing their thoughts and opinions at times of interviews both technical and HR. Based on the feedback from stake holders and Alumni for the betterment of students in improving their Communication Skills, Digital Assisted Language Learning System (DALLS) was introduced.

DALLS is a system of self-paced learning in a controlled laboratory activity and the capsule activities namely LSRW tasks are rolled out to the students in the form of online quizzes and activity-based learning. DALLS works on the Microsoft Teams Meeting & MOODLE Platform. DALLS incorporates the Activity-Based Learning (ABL) into the learning system. A discernible improvement is observed among the learners who are using this ABL method. This system of learning is not pivoted to the short-term learning but DALLS certainly supplements the learning habits of students and reinforces the practices of learners in honing their communication Skills in the long run. DALLS has boosted the confidence and participatory skill of the students and a moderate level of improvement in the oral presentations. This system of learning is in good practice when compared to the earlier theory course.

DALLS has facilitated 1790 first year students since 2018-19 to improve their English Communication Skills in the first two semesters. In addition to this, 2171 second year students were imparted LSRW as a part of Career Competency Development I & II till date from 2018-19. 800 students of placement interested were able to take up the verbal ability part of the screening tests and acing the interviews confidently and qualitatively.

#### **Innovation and Start-Ups**

KSRCT ensures maximum exposure to students in innovation and pre-incubation activities at an early stage and to support the pathway from ideation to creation to market. Institution organizes idea and innovation competitions, hackathons, workshops, boot camps, seminars, conferences, exhibitions and mentoring mechanisms with academic and industry personnel, giving real-life challenges, awards and recognition. Institution has taken collective efforts to identify, scout, acknowledge, support and seed fund proven student ideas and innovations and further facilitate their entrepreneurial journey. Institution facilitates by inking MoU with M/s Chatting Birds and Vibazone, a representative Mr.Muthu Singaram, visit two days per month as an External member to our Campus and train the students in entrepreneurship and product development. KSR-PTC Centre of Excellence is provided with world class facility to facilitate innovation. Pre-incubation/Incubation support also been facilitated to the students and faculty members, who are interested in launching a start-up. The modalities of its operation royalty and rental will be decided on a case-by-case basis depending upon the nature of services and support offered through incubation centre. This practice and hard efforts has brought a robust innovation and start-up ecosystem in KSRCT.

Internal Quality Assurance Cell extends support and initiate the valuable academic activities to the Institution and paving way for such good practices.

File Description	Document
Any additional information	<u>View Document</u>
Link for additional information	View Document

6.5.2 The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms and recorded the incremental improvement in various activities (For first cycle - Incremental improvements made for the preceding five years with regard to quality For second and subsequent cycles - Incremental improvements made for the preceding five years with regard to quality and post accreditation quality initiatives )

#### **Response:**

#### **Examination System**

The students' learning is measured in conformity with Blooms Taxonomy i.e. higher order thinking skills and lower order thinking skills. The examination system is modified to access the different level skills of the students' learning. The questions are mapped to test the skills at different levels and the course outcomes are mapped with every question. This process is in existence for both internal as well as external exams. This type of strategic examination system helps to evaluate the students' performance on continuous basis and helps to develop their analytical thinking abilities.

#### **Question paper Audit:**

In order to maintain uniform assessment of internal and end semester examinations, question papers are audited periodically. Question papers of internal tests are audited at the respective department level by module coordinators. End Semester examination question papers are audited by experts who are invited from other institutions. Corrective actions are taken based on the audit.

#### **Answer script Audit:**

Students are provided with an opportunity to view their answer scripts (of each course) after completion of evaluation and announcement of results. This is aimed to bring more transparency and also reduces the number of re-totaling/re-valuation cases and End Semester examination answer scripts are audited by experts who are invited from other institutions. Corrective actions are taken based on the audit.

File Description	Document
Any additional information	View Document
Link for additional information	View Document

#### **6.5.3** Quality assurance initiatives of the institution include:

- 1. Regular meeting of Internal Quality Assurance Cell (IQAC); Feedback collected, analysed and used for improvements
- 2. Collaborative quality initiatives with other institution(s)
- 3. Participation in NIRF
- **4.** Any other quality audit recognized by state, national or international agencies (ISO Certification)

<b>Response:</b> All of the above	
File Description	Document
Upload e-copies of the accreditations and certifications	View Document
Institutional data in prescribed format	View Document
Any additional information	View Document
Paste web link of Annual reports of Institution	<u>View Document</u>
Link for additional information	View Document

#### **Criterion 7 - Institutional Values and Best Practices**

#### 7.1 Institutional Values and Social Responsibilities

7.1.1 Measures initiated by the Institution for the promotion of gender equity during the last five years.

#### **Response:**

K.S.Rangasamy College of Technology focusses on gender equality and has a functional framework to promote the level of educational and technical skills among the women students from rural background. Various cells have been formed to adjudicate and to rise women empowerment in the institution. Cells comprises of Grievances cell, Women Empowerment Cell, and Anti-Sexual Harassment Cell to look after the issues raised by the women on any gender inequality, discrimination and sexual harassment. These cells promote friendly environment and better exposure to overcome shyness and fear and to voice out for their genuine problems. Remedial action will be taken once the complaint was raised by the girl students to the committee.

Constitution of India is made as mandatory course for all the students in order to learn more about legal issues, women's rights and awareness on any gender discrimination. child abuse, dowry, female infanticide and gender inequality were taught as a part of programme for the students joining in National Cadet Corps (NCC). The prime importance was given with respect to curricular & co-curricular activities, the girl students are given equal chance to showcase their potential in all areas like sports, cultural and on the academic part too. The Institution has appointed women physical director to take care of the training / coaching and to accompany with them for the events. Women Empowerment cell often conducts various events and programs to bring out the hidden talents, Counselling assistance, mental health support and also provides fresh breathing environment by overcoming all sorts of issues related to discrimination.

Gender sensitization events are not only the part of the Institution, the motivated faculty and student team are involved in rising strong girl force in the nearby schools and colleges of the rural regions as a part of co-curricular outreach activities. The Institution has also rendered entrepreneurship opportunities to the women stakeholders and public through focused workshops and trainings and has enabled wide opportunities and amenities for women driven startups.

The Institution ensures female admissions to various programmes, scholarships and as lead role among student community cells and forums with equal ratio of office bearers to promote equality and provides equal opportunities for women faculty to take up leader positions. Common day care facilities for the kids of faculty & staff has been arranged inside the campus.

The Institution ensures women's safety as a prime importance with code of conduct at hostel and in the Premises. It facilitates by providing online leave application approval with the knowledge of class advisor, head of the department and parents of the concerned women hostel student and ensures the girls at hostel by reporting back at 6 pm in hostel. Health safety is ensured by facilitating them with in house doctor service and 24/7 ambulance to reach multi-speciality hospital at medical emergency situation. Girls common rooms with three beds to take rest during ill health days is facilitated in each block.

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File Description	Document
Annual gender sensitization action plan	View Document
Specific facilities provided for women in terms of: a.Safety and security b.Counselling c.Common Rooms d. Day care center for young children e. Any other relevant information	View Document

### 7.1.2 The Institution has facilities for alternate sources of energy and energy conservation measures

- 1. Solar energy
- 2. Biogas plant
- 3. Wheeling to the Grid
- 4. Sensor-based energy conservation
- 5. Use of LED bulbs/ power efficient equipment

**Response:** A. 4 or All of the above

File Description	Document
Geotagged Photographs	View Document
Any other relevant information	View Document

## 7.1.3 Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste (within 500 words)

- Solid waste management
- Liquid waste management
- Biomedical waste management
- E-waste management
- Waste recycling system
- Hazardous chemicals and radioactive waste management

#### **Response:**

K.S.Rangasamy College of Technology has implemented eco-friendly integrated waste management concept and practicing the reduced, reused and recycling principles regularly to make the Campus a green one. Important practices implemented in the Institution for sustainable waste management are Solid Waste Management, Liquid Waste Management, E-waste Management, Bio Medical Waste Management, Waste Recycling System and Hazardous Chemicals Management. In the practice of Sustainable Waste Management, the Institution has received District Green Champion Award honoured by Government of India/Mahatma Gandhi National Council of Rural Education (MGNCRE)/ Department of Higher Education/ Ministry of Education in the presence of The District Collector, Namakkal District, Tamil Nadu for the academic year 2020-2021.

Waste Management as it plays a pivotal role is classified and collected from various sources as degradable and non-degradable waste. Waste bins in classrooms, laboratories, seminar halls, food courts and hostel dining areas to collect the food waste and other waste. Segregated waste are taken for recycling. Organic waste such as tree leaves, flowers and papers are used as feed for mushroom cultivation plant in the Institution. Food waste is used in production of biogas. Food wastes, human excreta and cow dungs are used as feed for digester. Biomedical wasteis collected separately and disposed as per the guidelines of the government.

Over utilization of ground water and surface water are much reduced in our institution by following the three R principle. Liquid waste collected from hostels, staff quarters and food courts are conveyed to the waste water treatment plant and treated. This treated water is tested in Environmental Engineering Laboratory to determine its quality and it is reused for gardening, toilet flushing, street washing and landscape irrigation. Recycle and reuse of water greatly helps in reducing the exploitation of ground water and surface water. Water level detection sensors installed in water tanks abated the level of wastage of water and this also helps in power consumption.

The Institution takes utmost care in collection, storage and safe disposal of E waste. Computers, printers with accessories, telephones, mobile phones, instruments, audio, video equipments, refrigerators, air conditioners, electronic spares, cables, wires, electric accessories, micro wave ovens, used batteries, ups etc are commonly notified E waste of the Institution. Separate room has been used to collect the E-waste from the institution. Innovative and good projects which are completed by undergraduate students are kept in department level as teaching aid to their juniors. Other project models are dismantled and will be handed over the required component like transformer, solar panel, power supply circuit, LED lights, relay and alarm circuit/buzzer to their junior students as per the request by students to do their mini project or final year project work.

Paper consumption is considerably reduced in the institution by adopting digital mode in all walks of works. In order to be an eco-friendly campus, usage of plastic bags is strictly banned inside the Campus.

File Description	Document
Relevant documents like agreements/MoUs with Government and other approved agencies	View Document
Geotagged photographs of the facilities	View Document
Any other relevant information	View Document

#### 7.1.4 Water conservation facilities available in the Institution:

- 1. Rain water harvesting
- 2. Borewell /Open well recharge
- 3. Construction of tanks and bunds
- 4. Waste water recycling
- 5. Maintenance of water bodies and distribution system in the campus

**Response:** A. Any 4 or all of the above

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File Description	Document
Geotagged photographs / videos of the facilities	<u>View Document</u>
Any other relevant information	View Document
Link for any additional information	View Document

#### 7.1.5 Green campus initiatives include:

- 1. Restricted entry of automobiles
- 2. Use of Bicycles/ Battery powered vehicles
- 3. Pedestrian Friendly pathways
- 4.Ban on use of Plastic
- 5. landscaping with trees and plants

**Response:** A. Any 4 or All of the above

File Description	Document
Various policy documents / decisions circulated for implementation	View Document
Geotagged photos / videos of the facilities	View Document
Any other relevant documents	View Document

## 7.1.6 Quality audits on environment and energy are regularly undertaken by the Institution and any awards received for such green campus initiatives:

- 1. Green audit
- 2. Energy audit
- 3. Environment audit
- 4. Clean and green campus recognitions / awards
- 5. Beyond the campus environmental promotion activities

**Response:** A. Any 4 or all of the above

File Description	Document
Reports on environment and energy audits submitted by the auditing agency	View Document
Certification by the auditing agency	View Document
Certificates of the awards received	View Document
Any other relevant information	View Document

#### 7.1.7 The Institution has disabled-friendly, barrier free environment

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- 1. Built environment with ramps/lifts for easy access to classrooms.
- 2. Divyangjan friendly washrooms
- 3. Signage including tactile path, lights, display boards and signposts
- 4. Assistive technology and facilities for Divyangjan accessible website, screen-reading software, mechanized equipment
- 5. Provision for enquiry and information: Human assistance, reader, scribe, soft copies of reading material, screen reading

**Response:** A. Any 4 or all of the above

File Description	Document
Policy documents and information brochures on the support to be provided	View Document
Geotagged photographs / videos of the facilities	View Document
Details of the Software procured for providing the assistance	View Document
Any other relevant information	View Document

# 7.1.8 Describe the Institutional efforts/initiatives in providing an inclusive environment i.e., tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and other diversities (within 500 words).

#### **Response:**

The Institution has students from various religions, communities, states and has diversified population and hence, always strives to promote values among students and takes major responsibility in fostering values in students by bringing up communal harmony. The students require a contact period to interact and know the practices in different communities. The ultimate harmony of the nation and world can be attained based on the universal values they learn, which should favour every one's life on earth and the sustainability of the earth ensures the same. The process of value formation concerning the different stages of development and cultural contexts highlighting the relationship between the individual and the society is promoted.

The Institution promotes value concerns to be rooted in contemporary contexts like various social issues and concerns like environmental sustainability where the interest in tree plantation drives, National unity, propagating the saving of river, Clean India campaign and plastic awareness are aroused. The enablement of forums for diversified interest has aided in bringing values to the life of people by building conducive environment and moral values.

Students have participated in preparing cotton bags as alternative to plastic bags and are distributed to pubic as a complement. The Institution has taken up a project to clean the regional places like temple, public areas in villages to show the responsibility in building a clean and sustainable environment. These activities provide a framework to prioritize the values to be nurtured depending on the cultural contexts, needs, resources, background, etc. of the students.

There is a diversity of contexts in which students are placed and there are variations in terms of conditions,

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resources, ideologies, orientation, governance and management systems, etc. Students and coordinators having of more social concern join hands with NSS/NCC volunteering team and participate in rallies for health awareness, stress management, health and hygiene awareness to village and do participate in various activities for the noble cause like marathon for cancer awareness, road safety awareness, etc. They ensure their participations in the public health, discipline and hygiene. Students and faculty join hands in the celebrations like communal harmony celebrations, gathering for religious celebrations like Pongal, Holi, Onam, Diwali, Bakrid and Christmas.

The positive relationships is cultivate among students, which are essential for the development of qualities such as cooperation and respect for a diversity of people and cultures that allow us to live and work in the realities of the world. The focus is turned to humanity very recently and especially, during pandemic times the diversified students have come forward to support the needy peoples in various forms of support. The volunteering team of NSS and staff coordinators have contributed food, essential amenities like hand-wash, sanitizer, gadgets, human support, materialistic support and COVID-19 data filling support by the SM Volunteers

The whole realm of activities and programmes in the Institution can have a tremendous impact on the learning of values by students and the objective is to provide experiential learning in not only knowing values but also by practicing them.

File Description	Document
Supporting documents on the information provided (as reflected in the administrative and academic activities of the Institution)	View Document
Any other relevant information	<u>View Document</u>

## 7.1.9 Sensitization of students and employees of the Institution to the constitutional obligations: values, rights, duties and responsibilities of citizens (within 500 words).

#### **Response:**

K.S.Rangasamy College of Technology promotes fundamental duties and rights of citizens in all their strides of progress. The idea behind the creation of awareness about the fundamental rights is to emphasize the obligation of the citizens in exchange for the comprehensive fundamental rights enjoyed by them.

There is a mandatory course on the Constitution of India for all firstyear students. The allocated faculty train and asses the students about the rights and duties of e very Indian citizen. The Institution offers 15 days' Student Induction programme to every first year students before the commencement of their regular classes in the first semester. They are mentored and inculcated with Universal Human Values. Professional Ethics course is also a part of curriculum to educate the students to resolve the moral issues in the profession. The Institution promotes consciousness among students about rights which are essential for protecting the citizens against the arbitrary exercise of power by the government. Apart from the meticulous curriculum, preparing young people to be active citizens is the core value of any educational institution.

Short movie sessions on being responsible in regional language is telecast every year to inculcate constitutional values and about the leader's contribution to nation by the people. Rally on constitutional responsibilities is also organized frequently to make them aware and disseminate to others about the importance of voters' rights and their impact in selecting the right government for the country is practised. Being the citizens of a democratic country, all are privileged to possess the fundamental rights. Apart from this, the unity should be shown in exhibiting the constitutional responsibilities.

The Institution motivates the students to participate in election duties as their prime responsibility to help the government to increase the polling percentage of responsible voters. Since, students are entering the college and facing their first election, their choice of selecting the political party should be focused on national developments and the same is preached to the young voters. Students take oath on National Unity Day on October 31 and National Voters' Day on January 25, and their participation in pledge is also regular in Grama Shaba Meetings as a part of Unnat Bharat Abiyan. KSRCTians are also aided in bringing the same constitutional values among the village people by making them to take part in panchayat meeting and ensuring the voters responsibilities. Samvidhan Dhivas - Constitution Day on November 26 is also celebrated by a live telecast of the speeches of the President, the Vice President and the Prime Minister at Institution premises.

The Institution creates awareness among the students' community about how rights and duties play an important part in the development of a nation or the growth of an organization. Further, a graduate's responsibilities during every graduation day were listed out and pledge is administered by the Head of the Institution. Good citizens are made by catering to the society to develop their full potential as citizens and the same should be at top priority for any educational institution. The Institution educates students to contribute the same to the society.

File Description	Document
• Details of activities that inculcate values; necessary to render students in to responsible citizens	View Document
Details of activities that inculcate values; necessary to render students in to responsible citizens	View Document
Any other relevant information	<u>View Document</u>

### 7.1.10 The Institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic programmes in this regard.

- 1. The Code of Conduct is displayed on the website
- 2. There is a committee to monitor adherence to the Code of Conduct
- 3. Institution organizes professional ethics programmes for students, teachers, administrators and other staff
- 4. Annual awareness programmes on Code of Conduct are organized

<b>Response:</b> B. 3 of the above	
File Description	Document
Details of the monitoring committee composition and minutes of the committee meeting, number of programmes organized, reports on the various programs etc., in support of the claims	View Document
Code of ethics policy document	View Document
Any other relevant information	View Document

### 7.1.11 Institution celebrates / organizes national and international commemorative days, events and festivals (within 500 words).

#### **Response:**

K. S. Rangasamy College of Technology rejoices with certain memorial days with the due respect. The Institution regularly celebrates Teachers' Day on September 5 and National Youth Day on January 12 by sharing greetings to members of faculty and students, and by flowering the portraits of Sarvapalli Dr. Radhakrishnan and Swami Vivekananda in remembrance respectively. Students in every department express their gratitude and greetings to their beloved teachers. Also on National Youth Day the Chicago speech recordings of Swami Vivekananda is shared to the young minds for admiring the idol of youth.

Independence Day on August 15 and Republic Day on January 26 are national commemorative days which is observed by formal parade, flag hoisting by the renowned persons. Usually, the Institution respects the national days in the green park with constellation parade organized by NCC and NSS volunteers with sweet distribution and paying tributes to the Father of the Nation with flowers. Special competitions like essay writing, poster and drawing competitions are organized for the students regularly.

Dr. APJ Abdul Kalam's Birthday Day on October 15 and Engineers' Day on September 15 are celebrated by paying tributes and flowering the portraits of Dr. APJ Abdul Kalam and Dr. Visvesaraya respectively by organising essay and quiz competitions every year. During pandemic period too these days were observed by sharing the remembrance flyers to its stake holders and students are encouraged to take part in virtual dance show. Virtual Independence Day Run version 1.0 and 2.0 was organised in 2020 and 2021 respectively by the Institution to propagate physical fitness among the stakeholders in the face of pandemic. In this regard, the Institutional orchestra team has also organized a virtual live concert.

National Education Day on November 11 is celebrated to honour the birth anniversary of Shri. Maulana Abul Kalam Azad by the NSS volunteers with a guest lecture presented by a renowned personality to motivate the students about the purpose of education, Martyrs' Day is observed on January 30 in remembrance of the assassination of Mohandas Karamchand Gandhi by observing silence for 2 minutes in the classrooms in the remembrance Mahatma Gandhi and other freedom fighters. International Women's Day is observed in a grand manner with many special events, and gifts. During pandemic period, it was observed and celebrated virtually.

Apart from these nationally important days, Cancer Day, Energy Conservation Day and Environment Day are also observed on February 4, December 14 and June 5 respectively by hosting events such as marathon,

tree plantation, and quiz competitions. The birth anniversary of Dr. Srinivasan Ramanujam is also celebrated on December 22 as Mathematical Day by hosting quiz competitions to bring the awareness among the young learners at national level and prizes were distributed to winners and runners.

File Description	Document
Geotagged photographs of some of the events	View Document
Any other relevant information	View Document
Annual report of the celebrations and commemorative events for the last five years	View Document

#### 7.2 Best Practices

7.2.1 Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual.

#### **Response:**

#### **Best Practice 1**

1. Title: KSRCT Institution's Innovation Council (IIC)

#### 2. Objectives of IIC

The Institution binds to focus of IIC as delineated by the Ministry of Education (MoE), Government of India. The objectives of IIC are:

- 1. To motivate, inspire and nurture students and staff by supporting them to work with new ideas, problem statements and transform them into prototypes/ working models.
- 2. To generate intellectual properties and commercialize innovations through technology transfer, technology licensing and startups etc.
- 3. To facilitate student community to interact with successful businessmen, metamorphose their innovative proposals, incubate their ideas/ prototypes, and execute their business/start-up plans.
- 4. To organize periodic workshops/ seminars/ brainstorming sessions with eminent professionals, entrepreneurs, investors and create a mentor pool for student innovators.
- 5. To host hackathons, idea competitions, mini-challenges etc. to scout ideas from young minds towards industry problems and social issues.

#### 3. The Context

Institution's Innovation Council (IIC) programme was started in November 2018 with the approval of MoE, to systematically foster the culture of innovation and start-up ecosystem in the Institution.

IICs' role is to engage large number of faculty, students and staff in various innovation and entrepreneurship related activities such as ideation. Problem solving, Proof of Concept development,

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Design Thinking, IPR, project handling and management at Pre-incubation/Incubation stage, etc., so that innovation and entrepreneurship ecosystem gets established and stabilized.

#### 4. The Practice

#### Vision / Mission of IIC established at the Institution

#### Vision

To create a sustainable innovation and entrepreneurship ecosystem in the campus for promoting technology transfer in science, technology, engineering and mathematics (STEM)

#### Mission

To facilitate smooth transition of innovations from ideation to commercialization through nurturing creativity, fostering logical and design thinking, mentoring and supporting start-ups.

#### Motto

#### Ideate | Innovate | Create

Since from inception, IIC has organized 200+ events to nurture and develop innovation and Entrepreneurship ecosystem in the Campus. KSRCT's Institution's Innovation Council has a President, a Vice President and a Convener to govern its functioning and has six executive teams namely, Innovation & IPR, Exhibition, Technology Transfer, Start-up & Entrepreneurship Development, Career Guidance and Corporate Relationship and Website cum Social Media Team to inculcate creativity, logical and design thinking among students' community to work with new ideas and transform them into prototypes. Webinars, workshops, panel discussions and competitions are organized periodically to connect the team with subject matter experts. IC model is unique and distinct at KSRCT, as it integrates the functionalities of flexibility calendar activities, scoring and reward system, decentralizing operation with division of work, progress monitoring and incentive mechanisms in coordinated manner.

KSRCT-IIC has the representation from various industry, academic institution, technology business incubators, faculty and students from various departments to have an Interdisciplinary ecosystem. Ideation generated by the students and faculty are periodically recorded through "Idea Box" contest which is organized once in every three months.

KSRCT-IIC was vibrant even in the face of COVID 19 pandemic and lockdown periods, by pursuing its activities virtually. The faculty and student communities were collaborative in bringing forth the ecosystem for innovation at the Campus.

#### 5. Evidence of Success

The evidence of KSRCT-IIC success lies in showcasing the achievements of its diversified members. IIC has bagged "3 Star" Rating in IIC 1.0; "5 Star" Rating in IIC 2.0 and "4 Star" Rating highest in IIC 3.0. KSRCT-IIC recognized as the Mentor Institute to guide 5 Mentee Institution's under "IIC Mentor Mentee Scheme 2021" with funding support of Rs.2,25,000/-.

#### A brief outline of the achievements are as follows

- 1. Toycathon 2021 Digital Edition Winner
- 2. Tamil Nadu Student Innovators 2020 Zonal Winner
- 3. Virtusa Codelite Contest Winners
- 4. India Design Week 2020 Finalists
- 5.33 Internship offers through IIC
- 6. Patient Interactive Robot system using IoT for COVID 19
- 7. Designed Fire Extinguisher Robot
- 8. Polyamide based thin film as benzene detector for optical sensor
- 9. IoT based Intelligent Seed Germination System
- 10. Skillsweb, a start-up on digital marketing with career services
- 11. MV SaP a start-up on Microbial Volatile Solution against Pest
- 12.P11 Innovators, a faculty start-up on the production of millet cookies

The Institution is indebted to KSRCT-IIC for its achievement for being categorized among **Band-Excellent group** in **ARIIA Ranking 2021** under among Self-financing/ Private institutions (Technical).

#### 6. Problems Encountered and Resources Required

The COVID 19 pandemic and accompanied lockdown were negating the fruitful collaboration of students for a vibrant local Innovation system but the IIC members have overcome the obstacle of the confluence of young minds by both physical and virtual transaction of ideas among them.

As far the resources are concerned, the Institution is providing with the required facilities for rolling out the IIC activities.

#### 7. Any Other Information

The Institution is among the 49 Institutions selected across the country to establish 1.34 Crore worth AICTE-IDEA (Idea Development, Evaluation & Application) Lab. The establishment of the Lab will accentuate the uplift the innovative ideas and entrepreneurship skills of faculty, students and local start-ups/ entrepreneurs / tradesman.

#### **Best Practice 2**

#### 1. Title: Skilling Internship Placement (SIP) through CoEs and MoUs

#### 2. Objectives of SIP through CoEs and MoUs

- 1. Establishment of more CoEs and to collaborate with more industries
- 2. Providing more skilling opportunity to the students and opportunity to understand the relevant skills required by the Institution
- 3. To enhance and enrich their employability skills for a career opening at the competitive and challenging recruitment process adopted by industries
- 4. To facilitate the students with online and offline internships
- 5. To ease the adaption process from institute to industry in the post selection period
- 6. To increase the recruitment companies and more career opportunities for the students

#### 3. Context

Industry expects fresh talents shall be of skilled / day one deployable. Internship places a vital role in the engineering student's career. Through internship, students get hands on experience and understand the industry requirements. Apart from the above, cost cutting and cost reduction in the overheads by the companies especially in the IT sector has become a practice. In this connection, companies have resorted not to bear the overheads on the technical skill infusions for the fresh employees and expect the institutions to ensure the basic skills requirements to be fulfilled either by enhancing the students' skills as preplacement task or by making an adaptation programme in the post-selection process.

Hence, through CoEs / MoUs / industry supported labs it is possible to achieve the "Career Skill Enhancement" during the sixth / seventh / Eighth semester, "Internship" during the vacation of any semester or eighth semester of programme and "Better Placement".

#### 4. The Practice

To implement the SIP, KSRCT CGCR team and all faculty are brainstormed about the process to be followed.

CGCR Team keen in approaching the industries and requested the industries about the CoE model from the year 2016. M/s Wipro is the first organization to implement the "Project Readiness Programme" (PRP).

The TalentNext- PRP was introduced to the pre-final years after their sixth semester as Project Readiness Programme (PRP) in 2016. The Institution pioneered to launch Project Based Learning (PBL) to which the faculty were trained by Wipro on JAVA technologies at Wipro Bangalore Campus. Ever since 2016, every aspiring student irrespective of the company they are aspiring, must undergo the PRP JAVA training for 240 hours in span of three months. This training covers the following topics

- 1. Java Programming, Web Development
- 2. Front End: HTML, CSS, Java Script, Bootstrap
- 3. Back End: J2EE (Servlet, JSP, Spring)
- 4. Database: Oracle

Other organizations which are agreed to establish the CoEs for "Hire-Train-Deploy" model are "Virtusa", "Aspire Systems" and the domains are .Net, Testing, Full Stack Development.

KSRCT has signed MoU with both the organizations during 2017 and 2018 respectively and established the industry supported Labs. Faculty members were trained on the domains. Placed students are in turn trained by the faculty members and cleared the international certifications on above said domains. This is the continuous practice for the last 4 years.

In addition to the CoEs, KSRCT is started to sign MoUs and establishing the CoEs with below industries for the **skill development**, Internship and Placement opportunity.

S. No.	Name of the Organization	Technologies	Train
1	Wipro	Core Java, Web Technology & Database	240
2	Infosys (Campus Connect)	Python	110
			ll l

3	Aspire Systems	Full Stack Development with .Net	
4	Virtusa – CRM	Microsoft Dynamic & Seibel	60
5	Virtusa – Testing	Angular, React, Java & Selenium	90
6	VirtusaNet	.Net	90
7	Augusta	Block chain	300
8	Automation Anywhere University	Robotic Process Automation	60
9	Salesforce	Trailhead Batch	50
10	CISCO (Netacad)	Programming Essential in Python	
11	Tejas Network	Optical Communication Hardware and Networking + Soft skills	
12	DxC Technologies	Cloud Infra and its services + Soft skills	200
13	NASSCOM	Future skills	Differ
14	PTC & DCS	PTC CREO, Additive Manufacturing, Reverse engineering,	300
15	Autodesk	Fusion 360 & Revit Architecture	60 &

Apart from this, KSRCT has collaborated with **M/s Internshala** and registered with AICTE's NEAT portal for the Internship. This results huge number of students start registered in the portal and getting internships regularly in the portal and other companies too. Particularly during the pandemic, the students of KSRCT got more online internships.

To give the flavour of recent technologies, KSRCT has signed MoU with ICT academy. Through this collaboration faculty and students of KSRCT would be able learn the recent skills / domains offered by the different industry. It is a value addition to the students and helped them to opt their career.

To conclude, from 2021 onwards KSRCT has initiated a new process "One Faculty One Industry". This helps the department to understand about the industry in better way and results more internships and career opportunities.

#### 5. Evidence of success

- PRP The TalentNext PRP Skill Enhancement Programme helps the students to get placed in various IT industries and prepares the students in industry grade projects on Core JAVA and web technologies. This Training programme has benefited more than 800 students who are placed both in wipro and other MNCs as well.
- Virtusa and Aspire Systems Students able to complete the international certifications like OCAJP, ISTQB, Brainbench started their career comfortably. Students are able to meet the industry expectation and performing excellent manner.
- The Institution has been awarded with 47th Rank in all India Level and 10th Rank in Zonal level for Internship in the year 2021. Due to the reception of awards and recognitions consecutively, the students are highly motivated in securing internships. During the period of December 2019 to February 2020, Kuldeep Singh A was an active member of Internshala's campus ambassador program Internshala Student Partner (ISP).
- Cisco Internship
- Number of students selected and participated: 143
- Number of students certified: 109

#### **ICT Academy Learnathon**

ICT Academy launched 'LEARNATHON' - a self-learning initiative for higher education students to build their foundational IT skills online. The Institution got second place in national level winner in the event. Number of students participated: 1810.

#### 6. Problems Encountered and Resources Required

The Initial batch aspirants had difficulty with coping up the 240 hours of continuous learning, but later they were aware that PRP has given them the required resources and confidence in marketing themselves to many companies and acquire diversified skills

The senior batch and peer interaction provided the encouragement and resources to their junior aspirants.

Establishing the industry supported labs and identifying the students for the domain was challenge initially. Later, by proper assessment schemes it was solved.

Faculty to train the students of the entire institution on IT skills were difficult during the initial stage.

Motivating the students to attend the Internship was difficult and later made it as mandatory and offered credits

Initially, faculty were struggled to approach the industries. However, with the support of alumni, it was easy to reach out the organizations.

File Description	Document
Best practices in the Institutional web site	View Document
Any other relevant information	View Document

#### 7.3 Institutional Distinctiveness

### 7.3.1 Portray the performance of the Institution in one area distinctive to its priority and thrust within 1000 words

#### **Response:**

#### **Institutional Distinctiveness**

#### **Programming Skill Development System (PSDS)**

Programming Skill Development System (PSDS), also known as DigiPro, is an indigenous web Integrated Development Environment (IDE) that facilitates more efficient and effective programming skills and

improvises the logical thinking ability of students. It is the combo of different programming languages such as C, C++, Java, Python, PHP, Perl, SQL, HTML, JavaScript, JQuery. It has a hierarchy of three levels of testing such as low, medium, and high. Students can practice and improve their thinking ability and programming skills. Anytime anywhere students can code in this platform. It can be accessed both online and LAN environment. Unique features of the IDE are that it automatically checks the logic using test cases options. Finally, it facilitates one to analyze the students' strength & weakness and improvising their programming skills.

#### **Objectives of PSDS**

- 1. To inculcate the logical thinking and improve the programming skills.
- 2. To identify the logic used by the students based on Test Cases.
- 3. To facilitate students to execute the codes in any programming languages such as C, C++, Java, Python, PHP, SQL, HTML, JavaScript, JQuery after the logical thinking process.
- 4. To permit the students to edit, view, retrieve and debug their codes at any time.
- 5. To equip students to be self-reliant in programming and code testing process.
- 6. To upload the learning materials relevant to the topic to be accessed and post questions as per the schedule for subjects: Fundamentals of programming, Data Structures, Object Oriented Programming, Java, Python and DBMS.
- 7. The students' progress can be monitored for better coding efficiency in terms of
  - 1. Test cases passed
  - 2.Logic used
  - 3. Time taken
  - 4. Compilation count
  - 5. Space used.
- 8. To administer online examinations and give online suggestions & clues to solve the problems.
- 9.To facilitate system evaluation and verification by faculty for programming efficiency and effectiveness.
- 10. To generate customized reports: student-wise, mark-wise, batch-wise, and program-wise.

PSDS, comprises of two sections, namely Faculty Section and Student Section. Faculty Section enables to upload the questions, evaluate, and analyze the student's coding performance and finally take report based on students' marks. It helps for the consistent improvement of students' programming skills.

Students' Section, on the other hand, the uploaded questions are displayed in the respective students' logins. First, level one questions will be displayed. The students must read the questions and code them for compiling and execution. Subsequently, students' must check the validity of their program statements using the test cases given by the faculty. It will automatically check once they click the validation button. Once test cases are 100% satisfied, they can submit for evaluation. Faculty checks and awards the marks for individual students. After the faculty approval, level two will open for coding and the same modality is repeated for level three to get opened. Finally, when all levels are completed, they will secure full marks for a single experiment. Based on these evaluations, students' can improve their programming skills.

The entire student community use PSDS as part of their laboratory requirements and get their programming skills assessed. Students find this platform very helpful in practicing and fine tuning their coding skills.

#### Other Utilities of DigiPro

The facilitations of DigiPro are not only in testing the programming skills of students but also its other utilities are follows:

- 1. A powerful platform to conduct online examinations both MCQs and descriptive questions
- 2. During pandemic period, DigiPro was effective in extending proctored online Examinations, and thereby efficiently support the progress of academic activities and examinations online
- 3. The platform was diligently developed to conduct internal hackathons and codeathon contests and help in identifying efficient top coders in the departments.
- 4. The platform was used as the Assessment Tool Support for the first level recruitment process by the companies such as M/s Codingmart, Bengaluru and M/s Granite River Labs Technology (GRL) Pvt. Ltd. Bengaluru.
- 5. DigiPro facilitated as the Assessment Tool Support for the ISTE Srinivasa Ramanujan Mathematics Competitions -2020 (SRMC-2020) conducted by the Indian Society for Technical Education, Tamil Nadu Section in the month of October and November 2020 & 2021 32,211 candidates were registered for the competition and 25,465 candidates have successfully completed.
- 6. The admissions details to various programmes, admitted student's database with the fee details are managed in this platform before being submitted to the Administrative Office.
- 7.7946 students from the Institution were benefited using DigiPro for the last five years.
- 8. AI Proctoring: In an online proctoring scenario, an individual student will typically be taking an examination in a room with internet access. To replicate a traditional, invigilated exam environment and to ensure that examination conditions are met the following thresholds and requirements are followed,
  - 1. Live proctoring: Authentication and monitoring of the whole examination is undertaken and offer a 20:1 student to proctor ratio for this scenario.
  - 2. Automated proctoring: A test-takers identity is verified by a live proctor and the examination is recorded to allow for a review of the test if behavioral anomalies were detected in the recording.
- 9. Practice Test Series (PTS 2021), a National level test virtual series for HSC students to practice MCQ and objective questions from Physics, Maths, Chemistry, Biology/Computer Science was facilitated in this platform. 9,754 students were registered and benefited.

The web link of DigiPro is: https://www.ksrctdigipro.in/

File Description	Document
Any other relevant information	View Document
Appropriate web in the Institutional website	View Document

### 5. CONCLUSION

#### **Additional Information:**

The Internal Quality Assurance Cell (IQAC) of the Institution chaired by the IQAC Coordinator who is nominated by the Head of the Institution and the Cell monitors the attainment of Vision and Mission of the Institution through its internal and administrative audits. The Cell proposes necessary changes for continuous improvement and quality assurance.

#### 5S Policy at the Academic Outset

In addition to this, the Cell has initiated with the 5S policy as the quality tool at the workplace comprising five primary phases, Sort (Seiri), Set in order (Seiton), Shine (Seiso), Standardize (Seiketsu) and Sustain (Shitsuke)

The IQAC has implemented its activities in line with the Quality Manual devised by the Cell, in which 5S quality tools have been incorporated to uphold the quality par excellence from the academic year 2022-2023.

The benefits to be derived from implementing 5S Policy are:

- Improved process flow of information among the departments
- Higher transparency in the exchange and sharing of academic instructions and practices
- Lower percentage of ambiguity in the system practice due to simplified process
- Increased process agility and flexibility
- Improved employee morale
- Better process utilization
- Enhanced Institution image among stakeholders students, parents, faculty, staff and corporates, and the Management

#### **Enrichment of Facility Management Policy**

The IQAC also strives for creating a conducive ambience for the members of faculty to delegate their responsibilities as per the enriched Facility Management Policy.

The IQAC core team including the Head attended the following Quality Enhancement Courses (QECs):

- 5S Excellence Competition and Training Series conducted by Confederation of Indian Industry(CII) Salem Zone from May 13, 2021 to October 20, 2021. The IQAC Team participated and presented a case study in the 5S Excellence Competition.
- A 2 Day Awareness Workshop on NIRF INDIA RANKINGS 2021 for Higher Educational Institutions conducted by Institute for Academic Excellence(IAE), Hyderabad on January 18 and 19, 2021.
- A 2 Day National Level Workshop for Higher Educational Institutions on Transformation through NAAC Accreditation Process by Institute for Academic Excellence (IAE), Hyderabad on June 21 and 22, 2021.
- Participated in the New Age Facility Management 2019 Southern Region on September 06, 2019 at Bengaluru.

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#### **Concluding Remarks:**

The Institution is aimed at creating most competent Scientists, Engineers, Technologists, Entrepreneurs, Managers and Researchers who are capable of assuming their rightful place as leaders in the industry/government organization. To achieve this vision, ample importance is given to the curricular aspects, Due importance is given to design, revision and effective delivery of curricula in most efficient manner.

The Institution has a research and innovation cell with transparent policies to promote research consultancy and IPR activities. Students are increasingly opting for entrepreneurship and taking guidance under the incubation cell of the institution. Infrastructure wise, the Institution has all required facilities for teaching learning like, library, computer lab, internet facility etc. and also supports sports and other physical activities.

To promote technical education and uplift the rural community, the institution offers scholarship and runs various capability enhancement and development schemes which reflects in excellent placement of students, students going for higher studies at national and international level and students opting for entrepreneurship. The abled leadership of the institute is well in tune with the Vision and Mission of the Institution and work in perfect harmony with absolute transparency. The strategic plans are responsibly made keeping the benefit of stakeholders at centre and outcomes are achieved in time bound manner as per the value system of the institutes with the help of various dedicated committees. The Institution has all processes in place and required infrastructure to excel and achieve its mission. The Institution has strong foundation to grow up as the University with the potential for excellence.

#### **6.ANNEXURE**

#### 1.Metrics Level Deviations

Metric ID | Sub Questions and Answers before and after DVV Verification

1.3.2 Number of value-added courses for imparting transferable and life skills offered during last five years.

1.3.2.1. How many new value-added courses are added within the last five years

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
29	37	44	38	36

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
19	20	36	21	26

Remark: DVV has considered Multiple participation of same student to be counted as ONE only.

1.3.3 Average Percentage of students enrolled in the courses under 1.3.2 above.

1.3.3.1. Number of students enrolled in subject related Certificate or Add-on programs year wise during last five years

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
4839	5834	7066	7473	8710

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
2301	3024	5066	6073	7810

Remark: DVV has given the input as per 1.3.2

Average percentage of seats filled against reserved categories (SC, ST, OBC, Divyangjan, etc. as per applicable reservation policy) during the last five years (exclusive of supernumerary seats)

## 2.1.2.1. Number of actual students admitted from the reserved categories year wise during last five years

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
592	488	562	691	722

Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
429	360	391	479	493

Remark: DVV has made the changes as per shared report of actual students admitted from the reserved categories by HEI.

## Ratio of students to mentor for academic and other related issues (Data for the latest completed academic year )

#### 2.3.3.1. Number of mentors

Answer before DVV Verification: 337 Answer after DVV Verification: 300

Remark: DVV has excluded those teachers has left the college.

### Average teaching experience of full time teachers in the same institution (Data for the latest completed academic year in number of years)

#### 2.4.3.1. Total experience of full-time teachers

Answer before DVV Verification: 5050.8 Answer after DVV Verification: 1098

Remark: DVV has excluded those teachers (experience) has left the college.

# Percentage of teachers awarded national / international fellowship for advanced studies/research during the last five years

## 3.1.3.1. The number of teachers awarded national / international fellowship for advanced studies / research year wise during last five years

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
29	47	25	33	27

#### Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
19	30	16	20	19

Remark: DVV has excluding courses sanctioned from AICTE-NPTEL may not be considered as an award.

# Number of awards and recognition received by the Institution, its teachers and students for extension activities from Government / Government recognised bodies during last five years

## 3.6.2.1. Total number of awards and recognition received for extension activities from Government/ Government recognised bodies year-wise during the last five years.

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
38	81	10	3	11

#### Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
16	62	06	3	09

Remark: DVV has excluded Certificate of appreciation, local Awards in nature shared by HEI.

- Number of extension and outreach programs conducted by the institution through NSS/NCC, Government and Government recognised bodies during the last five years
  - 3.6.3.1. Number of extension and outreach programs conducted by the institution through NSS/NCC, Government and Government recognised bodies during the last five years

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
16	20	20	16	16

#### Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
13	18	18	16	12

- Average percentage of students participating in extension activities listed at 3.6.3 above during the last five years
  - 3.6.4.1. Total number of students participating in extension activities listed at 3.6.3 above year-wise during the last five years.

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
3046	2192	3061	3660	2793

#### Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
2163	2672	2939	3660	1514

4.2.3 Average annual expenditure for purchase of books/ e-books and subscription to journals/e-journals during the last five years (INR in Lakhs)

# 4.2.3.1. Annual expenditure of purchase of books/e-books and subscription to journals/e-journals year wise during last five years (INR in Lakhs)

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
30.04	29.54	31.37	35.67	24.33

#### Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
0.1	2.29	1.90	0.1	19.01

Remark: DVV has made the changes as per shared report (additional) of purchase of books/e-books and subscription by HEI.

#### 4.3.4 Institution has the following Facilities for e-content development

- 1. Media centre
- 2. Audio visual centre
- 3. Lecture Capturing System(LCS)
- 4. Mixing equipments and softwares for editing

Answer before DVV Verification : A. All of the above Answer After DVV Verification: D. 1 of the above

Remark: DVV has considered D. 1 of the above as per shared report by HEI.

### Funds / Grants received from non-government bodies, individuals, philanthropists during the last five years (not covered in Criterion III and V) (INR in Lakhs)

# 6.4.2.1. Total Grants received from non-government bodies, individuals, Philanthropers yearwise during the last five years (INR in Lakhs)

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
2.869	3.439	0.70725	0.626	0.641

#### Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	0

Remark: letter indicating the grants/funds has not shared by HEI.

### 7.1.10 The Institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic programmes in this regard.

- 1. The Code of Conduct is displayed on the website
- 2. There is a committee to monitor adherence to the Code of Conduct
- 3. Institution organizes professional ethics programmes for students, teachers, administrators and other staff
- 4. Annual awareness programmes on Code of Conduct are organized

Answer before DVV Verification : A. All of the above Answer After DVV Verification: B. 3 of the above

Remark: DVV has made the changes as per shared report of Code of Conduct, code of ethics by

HEI.

#### 2.Extended Profile Deviations

ID	Extended Questions	
1.2	Number of outgoing / final year students year-wise during last five years	

#### Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
921	935	1113	1237	1366

#### Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
954	966	1224	1394	1487

#### 2.5 Total Expenditure excluding salary year-wise during last five years (INR in Lakhs)

#### Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
1005.16	1390.22	1072.57	1329.87	1442.43

#### Answer After DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
519.43	668.15	796.62	931.16	992.21