

#### YEARLY STATUS REPORT - 2021-2022

Part A			
Data of the Institution			
1.Name of the Institution	M. S. RAMAIAH INSTITUTE OF TECHNOLOGY (AUTONOMOUS)		
Name of the Head of the institution	Dr. N V R NAIDU		
• Designation	Principal		
• Does the institution function from its own campus?	Yes		
Phone No. of the Principal	08023603122		
Alternate phone No.	08023603122		
• Mobile No. (Principal)	9972087184		
• Registered e-mail ID (Principal)	principal@msrit.edu		
• Address	MSRIT Post, MSR Nagar		
• City/Town	Bengaluru		
• State/UT	Karnataka		
• Pin Code	560054		
2.Institutional status			
<ul> <li>Autonomous Status (Provide the date of conferment of Autonomy)</li> </ul>	20/12/2007		
• Type of Institution	Co-education		
• Location	Urban		

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• Financial	• Financial Status		Self-financing					
Name of the IQAC Co-ordinator/Director		Dr. G M Madhu						
• Phone No	).			08023603122				
• Mobile N	o:			9845381349				
• IQAC e-r	nail ID			iqac@msrit.edu				
	3.Website address (Web link of the AQAR (Previous Academic Year)		AR	https://s3.ap-south-1.amazonaws.c om/www.msrit-iqac.com/assets/img/ AQAR REPORT 2020 2021.pdf				
4.Was the Acade that year?	emic Calendar p	orepare	d for	Yes				
•	• if yes, whether it is uploaded in the Institutional website Web link:		ie	http://www.msrit-iqac.com/assets/ img/reports/Academic%20Calendar/A C_2021_2022.pdf				
5.Accreditation	Details							
Cycle	Grade	CGPA	Year of Accredita		Validity from		from	Validity to
Cycle 2	A+	3	.28 2023		1	01/03/	2021	28/02/2026
6.Date of Establishment of IQAC			01/10/2014					
7.Provide the list of Special Status conferred by Central and/or State Government on the Institution/Department/Faculty/School (UGC/CSIR/DST/DBT/ICMR/TEQIP/World Bank/Oof UGC, etc.)?								
Institution/ Department/Faculty/Scool			Funding Agency		Year of Award with Duration		A	mount
Nil	Nil		Nil		Nil			Nil
8. Provide details regarding the composition of the IQAC:								
-	Upload the latest notification regarding the composition of the IQAC by the HEI		•	View File				
9.No. of IQAC meetings held during the year		4						

Were the minutes of IQAC meeting(s) and compliance to the decisions taken uploaded on the institutional website?	Yes			
If No, please upload the minutes of the meeting(s) and Action Taken Report	No File Uploaded			
10.Did IQAC receive funding from any funding agency to support its activities during the year?	No			
If yes, mention the amount				
11.Significant contributions made by IQAC dur	ing the current year (max	kimum five bullets)		
IQAC suggests the departments to c /seminars/ conferences in the emer		ps /FDPs		
Support during the visits of NBA a Ranking.	nd UGC committees	and NIRF		
Outcomes Based Education (OBE) is an initiation by IQAC to reform the teaching and learning process in the institution.				
Initiation and support in preparing the SAR for the NBA accreditation.				
To inculcate self-learning capabilities, IQAC encouraged for online certification courses such as NPTEL, Swayam, Course era etc.				
To conduct Training Programs on Pedagogy, Skill Enhnacement & Outreach activities.				
12.Plan of action chalked out by IQAC at the beginning of the academic year towards quality enhancement and the outcome achieved by the end of the academic year:				

Plan of Action	Achievements/Outcomes
To conduct at least two international conferences	Department of Mechanical, Civil, Chemical, BioTechnology and IEM organized an international conference on 13th October 2022 2) Department of EEE, ECE, TCE, EIE, CSE, MCA, ISE and ML organized an international conference during December 2022.
Accreditation of 10 Programmes from NBA	3 Programs accreditated for 6 years and 7 years accrediated for 3 years.
To participate in NIRF	Submitted the application and institute Ranked 67th among 100 institution across India.
To apply extension of 16 R&D centres and 2 new R&D centres	All the departments have been extended as reaserch centres from VTU & 2 new departments i.e., Architecture & Electronics and Instrumentation Engineering departments has been recognised as research centres.
To prepare for VTU LIC visit	Successfully completed the visit. All the Ph.D programs have been awarded autonomous status.
Application to AISHE	Submitted the application to AISHE for the academic year 2021-22
To organize workshops/FDPs in collaboration with industry.	All the departments have organized the workshops/FDPs in collaboration with industry.
13.Was the AQAR placed before the statutory body?	Yes
• Name of the statutory body	

Name of the statutory body	Date of meeting(s)
Academic Council	23/06/2022
14.Was the institutional data submitted to AISHE ?	Yes

• Year

Year	Date of Submission
2022	02/02/2023

#### 15. Multidisciplinary / interdisciplinary

MSRIT has a holistic multidisciplinary curriculum to equip the students with the knowledge on interested areas apart from their core curriculum. Humanities, Science and Mathematics are an integral part of the engineering courses in the Institute. Along with the core curriculum students must opt for open / global electives in the allied engineering / Basic Sciences courses. Planned to introduce major / minor degree programs to effectively implement multidisciplinary concepts. Inter departmental projects has been encouraged to provide diversified knowledge in engineering, humanities & social sciences. Projects on community engagement and social service are undertaken by students every semester. The institute has a 9 Centres of Excellence / Skill Centres to promote interdisciplinary project, research & teaching learning. The Institute organizes many interdisciplinary international conferences every year to promote a blending of different disciplines leading to the exchange of research ideas and knowledge on topics of overlapping domains. Some of the conferences are ICARES, ICRAES, I4C. Many Hackathons have been arranged to promote interdisciplinary culture.

#### **16.Academic bank of credits (ABC):**

Academic Bank of Credits (ABC) is a virtual/digital storehouse that contains the information of the credits earned by individual students throughout their learning journey. It will enable students to open their accounts and give multiple options for entering and leaving after the effective implementation of NEP. ABC has been established as per the guidelines of UGC.

ABC can be considered as an authentic reference to check the credit record of any student at any given point in time. Thus, the concept

of ABC is fuel to boost the efficiency of faculty and help students embrace a multi-disciplinary educational approach. The idea is to make students "skillful professionals" and help their overall growth.

#### 17.Skill development:

The MSRIT has established 9 skill development centres in the below mentioned areas The total area allocted is around 1800 Sq. Mtrs.More than 1500 students have been trained in all the specialized domains by the trained faculties to cater the skills required for the industry. Many students have been encouraged for the prototype development & enhance the research culture along with Curriculum. Institute has invested around 14 Crores to establish the Skill Centres & train.

- 1. Centre for Imaging Technologies (CIT)
- 2. Centre for Advanced Materials Technology (CAMT)
- 3. Centre for Cyber Physical Systems (CCPS)
- 4. Centre for Antennas and Radio Frequency Systems(CARFS)
- 5. Schneider Centre of Excellence on Building Automation
- 6. Virtual Instrumentation using LabVIEW
- 7. Electric Drives control using Texas Instruments' C2000 MCUs
- 8. Apple Authorised Training Centre for Education
- 9. Simulation Lab for Signal and Image Processing

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

MSRIT has adopted humanities courses to encourage critical enquiry which cuts across disciplines to promote synergistic studies connecting humanities with science and technology. These courses generate interest among the students as well as throw new light on existing problems of mankind. These courses created platform for engineering students for creative combination of humanities with science and technology for unearthing interdisciplinary insights and confluence of disciplines. Courses such as Environmental Sciences, Kannada, Professional Ethics, English Communication, Design Thinking, Scientific Approach to Health, Yoga etc., are taught.

#### 19. Focus on Outcome based education (OBE): Focus on Outcome based education (OBE):

MSRIT has adopted Outcome Based Education (OBE) since 2011 and the OBE based curriculum development has been implemented to address all the graduate attributes. Curriculum content addresses all the Programme Outcomes (PO) and Programme Specific Outcomes (PSO) for UG

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and PG programmes defined by NBA. The Choice Based Curriculum has been implemented by considering the Programme Specific Criteria of the professional bodies and guidelines of AICTE, UGC & VTU. Every programme offers professional core and elective courses along with open electives (UG). The Institute has made internship mandatory to expose students to industrial environment. The curriculum formulated by the department is presented to Department Advisory Board (DAB) and suggestions if any are incorporated in the curriculum before presenting to Board of Studies (BOS) and Academic Council for approval. The Institute gives more emphasis for the value-added courses and NPTEL/SWAYAM courses for overall development of students. Course outcomes (COs) of the curriculum of every programme is mapped with program outcomes (POs) and programme specific outcomes (PSOs). The Board of Studies of each Programme/Department typically consists of eminent scientists, academicians from highly reputed Institutions, Industry Professionals and Alumni. Good number of events/programmes on soft skills and professional development are conducted within the campus to enrich the skills of the students. Institute has a well-thought-out mechanism to obtain feedback from all the stake holders including students regarding the curriculum. Faculty conducts the course end survey at the end of the semester on attainment of course outcomes, program outcomes and program specific outcomes for the course delivered by him/her. Analysis of attainments are made by Program Assessment Committee (PAC) of each programme.

#### 20.Distance education/online education:

Majority of the faculty have adopted ICT tools for effective teaching and learning. More than 200 lectures have been recorded and the repository is available for students to access online. Institute also encourages modern teaching learning tools such as MOOCs, NPTEL, E-yantra, Swayam etc. Every year more than 450 students registered for online courses in NPTEL & more than 250 students opt for online courses from Course era and Udemy. 18 Online course credits weightage has been given for the award of honors degree for the Undergraduate Programs. Online courses are mandatory for awarding internal marks in every course. Planning to start Online Courses (ODL Courses) in the upcoming year.

#### **Extended Profile**

#### 1.Programme

1.1

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#### Number of programmes offered during the year:

File Description	Documents
Institutional Data in Prescribed Format	View File

#### 2.Student

2.1

Total number of students during the year:

File Description	Documents
Institutional data in Prescribed format	View File

2.2

Number of outgoing / final year students during the year:

File Description	Documents
Institutional Data in Prescribed Format	<u>View File</u>

2.3

Number of students who appeared for the examinations conducted by the institution during the year:

File Description	Documents
Institutional Data in Prescribed Format	<u>View File</u>

#### 3.Academic

3.1

Number of courses in all programmes during the year:

File Description	Documents
Institutional Data in Prescribed Format	<u>View File</u>

3.2

Number of full-time teachers during the year:

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Extended Profile				
1.Programme				
1.1		32		
Number of programmes offered during the year:				
File Description	Documents			
Institutional Data in Prescribed Format		View File		
2.Student				
2.1		5860		
Total number of students during the year:				
File Description	Documents			
Institutional data in Prescribed format		View File		
2.2		1389		
Number of outgoing / final year students during t	he year:			
File Description	Documents			
Institutional Data in Prescribed Format		<u>View File</u>		
2.3		5860		
Number of students who appeared for the examine conducted by the institution during the year:	nations			
File Description	Documents			
Institutional Data in Prescribed Format		View File		
3.Academic				
3.1		1565		
Number of courses in all programmes during the year:				
File Description	Documents			
Institutional Data in Prescribed Format		View File		

3.2	384
Number of full-time teachers during the year:	
File Description	Documents
Institutional Data in Prescribed Format	<u>View File</u>
3.3	329
Number of sanctioned posts for the year:	
4.Institution	
4.1	1411
Number of seats earmarked for reserved categoric GOI/State Government during the year:	es as per
4.2	131
Total number of Classrooms and Seminar halls	
4.3	3605
Total number of computers on campus for acader	nic purposes
4.4	2456.37
Total expenditure, excluding salary, during the yell Lakhs):	ear (INR in

#### Part B

#### **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 are reflected in Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) of the various Programmes offered by the Institution.

The Institute has the systematic procedure for development, revision and implementation of curriculum of all the departments. The curriculum is designed carefully by addressing the recent technologies and the opportunities existing in regional and global level with all necessary fundamentals.

Factors for Curriculum Design: The Curriculum is designed to

ensure that the students have the required domain knowledge, skills and attitude. The factors considered for design of curriculum are: (i) Syllabus of various reputed Indian and International Universities (ii) Model curriculum prescribed by AICTE, (iii) The Program Specific Outcomes of professional bodies, (iv) Suggestions by industry experts and alumni, (v) Syllabi of various competitive exams like GATE, IES, etc.

Implementation of Outcome Based Education (OBE) in the Curriculum: The initial phase for ensuring academic quality is the design of the curriculum. The next phase, the Course Outcomes (COs) for every course is mapped with the Program Outcomes (POs) of NBA and the Program Specific Outcomes (PSOs) of the program. An effective implementation of this Outcomes Based Education (OBE) ensures that our graduating engineers have all the 12 POs defined by NBA, and hence can compete on a global platform, and have expected global attributes.

File Description	Documents
Upload additional information, if any	<u>View File</u>
Link for additional information	http://www.msrit- iqac.com/Syllabus_21-22.html

#### 1.1.2 - Number of Programmes where syllabus revision was carried out during the year

32

File Description	Documents
Minutes of relevant Academic Council/BOS meeting	<u>View File</u>
Details of syllabus revision during the year	<u>View File</u>
Any additional information	<u>View File</u>

## 1.1.3 - Number of courses focusing on employability/entrepreneurship/ skill development offered by the Institution during the year

193

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File Description	Documents
Curriculum / Syllabus of such courses	<u>View File</u>
Minutes of the Boards of Studies/ Academic Council meetings with approval for these courses	<u>View File</u>
MoUs with relevant organizations for these courses, if any	<u>View File</u>
Any additional information	<u>View File</u>

#### 1.2 - Academic Flexibility

#### 1.2.1 - Number of new courses introduced across all programmes offered during the year

#### 193

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	<u>View File</u>
Any additional information	<u>View File</u>
Institutional data in prescribed format (Data Template)	<u>View File</u>

## ${\bf 1.2.2 - Number\ of\ Programmes\ offered\ through\ Choice\ Based\ Credit\ System\ (CBCS)/Elective\ Course\ System}$

32

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	<u>View File</u>
Any additional information	<u>View File</u>
List of Add on /Certificate programs (Data Template)	<u>View File</u>

#### 1.3 - Curriculum Enrichment

1.3.1 - Institution integrates cross-cutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability, and Human Values into the curriculum

Ethics into the Curriculum: To address the cross cutting issues

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which are relevant to Environment and Sustainability, Human Values and Professional Ethics, the institution included courses in the curriculum. Courses such as Environmental studies, Kannada manasu, Kannada kali, Constitution of India, Professional communication, Air pollution& control, Human anatomy, Human physiology, Industrial & environmental biotechnology, solid waste management, Professional Ethics and Environmental Studies have been included in the UG programmes. a) Human Values: To inculcate moral, social and ethical values. To address the human values, following courses are offered by the Institution like: Human Physiology(HSAEC310/HSAEC410), Food Biotechnology(HSAEC310/HSAEC410), Human Resource Management & Yoga.

- b) Professional Ethics Courses such as Scientific Writing and Communication (BTAEC310/BTAEC410) and Indian Education Systems (MEAEC311/MEAEC411) are offered for first year UG courses of all branches of Engineering. To address Professional Ethics, the following courses are offered by the Institution: Scientific Writing and Communication (BTAEC310/BTAEC410) and Indian Education Systems (MEAEC311/MEAEC411).
- c) Environment and Sustainability: Course on Environmental Studies have been offered for all UG programmes. To create awareness among the students a number of courses are introduced like Environmental Life Cycle Assessment (CHAEC310/CHAEC410), Engineering Geology (CVAEC310/CVAEC410), Electrical Safety (EEAEC310/EEAEC410), Agriculture Technology (ETAEC310/ETAEC410), Green IT and Sustainability(ISAEC310/ISAEC410).

Solid Waste Management (CVPE 652), Air Pollution and Control (CVE 744).

File Description	Documents
Upload the list and description of the courses which address issues related to Gender, Environment and Sustainability, Human Values and Professional Ethics in the curriculum	<u>View File</u>
Any additional information	<u>View File</u>

## 1.3.2 - Number of value-added courses for imparting transferable and life skills offered during the year

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#### 15

File Description	Documents
List of value-added courses	<u>View File</u>
Brochure or any other document relating to value-added courses	<u>View File</u>
Any additional information	<u>View File</u>

#### 1.3.3 - Number of students enrolled in the courses under 1.3.2 above

#### 1271

File Description	Documents
List of students enrolled	<u>View File</u>
Any additional information	<u>View File</u>

#### 1.3.4 - Number of students undertaking field work/projects/ internships / student projects

#### 1350

File Description	Documents
List of programmes and number of students undertaking field projects / internships / student projects	<u>View File</u>
Any additional information	<u>View File</u>

#### 1.4 - Feedback System

## 1.4.1 - Structured feedback and review of the A. All 4 of the above syllabus (semester-wise / year-wise) is obtained from 1) Students 2) Teachers 3) Employers and 4) Alumni

File Description	Documents
Provide the URL for stakeholders' feedback report	https://msrit.edu/curriculum-feedback- analysis.html
Upload the Action Taken Report of the feedback as recorded by the Governing Council / Syndicate / Board of Management	<u>View File</u>
Any additional information	<u>View File</u>

#### 1.4.2 - The feedback system of the Institution A. Feedback collected, analysed comprises the following

and action taken made available on the website

File Description	Documents
Provide URL for stakeholders' feedback report	https://msrit.edu/curriculum-feedback- analysis.html
Any additional information	<u>View File</u>

#### TEACHING-LEARNING AND EVALUATION

#### 2.1 - Student Enrollment and Profile

#### 2.1.1 - Enrolment of Students

#### 2.1.1.1 - Number of students admitted (year-wise) during the year

5860

File Description	Documents
Any additional information	<u>View File</u>
Institutional data in prescribed format	<u>View File</u>

#### 2.1.2 - Number of seats filled against reserved categories (SC, ST, OBC, Divyangjan, etc.) as per the reservation policy during the year (exclusive of supernumerary seats)

1334

File Description	Documents
Any additional information	<u>View File</u>
Number of seats filled against seats reserved (Data Template)	<u>View File</u>

#### 2.2 - Catering to Student Diversity

2.2.1 - The institution assesses students' learning levels and organises special programmes for both slow and advanced learners.

M S Ramaiah Institute of Technology has students from other states in India and countries with different backgrounds. The institution assesses the learning levels of the student right from the time of admission to the institute through a structured orientation programme. Some of these activities are:

Bridge Courses: Every year, before the commencement of the regular classes, identified students mainly foreign nationals are trained in mathematics, physics and English language courses. The lateral entry (Diploma) students' must take a bridge courses in mathematics and social sciences. Slow Learners: Slow learners are also identified during the course of the semester based on their performance in the Internal Assessment tests. Mentoring: each student is assigned a "Proctor" who is his academic advisor for the duration of his studies. When the marks are below the expected levels the Proctor counsels their students to improve performance. Remedial Classes: When test marks are below the eligibility level in a course, the department schedules remedial classes to help the student understand the subject better.

Advanced Learners: Advanced Learners are identified during the semester for different courses based on their academic performance.

Certificate courses are conducted in topics of the domain for fast learners, allowing for industryscale application level knowledge to be imparted to the students.

Vocational courses are run by the department of Computer Science and Engineering for all students like Web Development, Android App Development, Java Programming, Data Analytics etc.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://s3.ap-south-1.amazonaws.com/www.ms rit-igac.com/assets/AQAR+DOCS/2.2.1-NRI+Ad mission+details+2021.pdf

#### 2.2.2 - Student – Teacher (full-time) ratio

Year	Number of Students	Number of Teachers
01/12/2022	5860	384

File Description	Documents
Upload any additional information	<u>View File</u>

#### 2.3 - Teaching- Learning Process

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

Various departments in the institute have adopted techniques to improve overall student learning levels, such that it is suitable for their curricula. Some specific cases are listed below.

Experiential learning: Project Based Learning, Mini-Projects, Modern Tool Usage

Project - based learning:

Students are encouraged to carry out a real time project in collaboration with industry or research institutions. All the projects are exhibited under one roof as "PRADARSHANA" every year which are evaluated by experts from industry and institute. This provides a good exposure for the students to interact with industry personnel and encourage for a start-up culture.

A sample list of items and samples of the details of the students centric methods adopted is available in the document attached.

Mini-Projects: Many programmes across the institution involve students in a Mini-Project as part of the continuous internal evaluation (CIE) component of the course. This provides a practical introduction to the theoretical concepts at an application level.

Modern Tools: Most of the programmes uses software simulations to supplement the theory courses and the students are encouraged to use open source softwares. Along with the open source softwares institution has many simulation software's such as, MATLAB, SIMULINK, MULTISIM, SPENHYSYS, ANSYS, COMSOL, PSCAD etc.

Participative learning: MOOCs, Case Studies

MOOCs: Students are encouraged to take MOOCs courses to supplement the regular teaching. The weightage for the same is given in Continuous Internal Evaluation. Students are regularly taking courses from NPTEL, SWAYAM etc

File Description	Documents
Upload any additional information	<u>View File</u>
Link for additional Information	https://archive.nptel.ac.in/LocalChapter/s tatistics/313/; https://www.msrit.edu/depa rtment/int-411.html

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

It is essential for students to learn and master the latest technologies in order to be corporate-ready. As a result, teachers along with the traditional mode of instruction are combining technology to engage students in long-term learning. Some of the tools MSRIT uses are:

#### ICT Tools:

- 1. Projectors projectors are available in various classrooms / labs.
- 2. Desktop and Laptops- Arranged in Computer Lab and Faculty cabins all over the campus.
- 3. Printers, Scanners & Photocopier machines Installed at Labs, HOD Cabins and all prominent places.
- 4. Seminar Rooms- Three seminar halls are equipped with all digital facilities.

- 5. Digital Display Boards and Smart Boards are installed all over the campus.
- 6. Online Classes are conducted through Zoom, Google Meet, Microsoft Team and Google Classroom).
- 7. MOOCS Platform (NPTEL, Coursera, Udemy, etc.).
- 8. Digital Library resources.

#### Use of ICT by Faculty

- PowerPoint presentations- Faculties are encouraged to use power-point presentations in their teaching by using LCDs and projectors. They are also equipped with a digital library, online search engines and websites to prepare effective presentations.
- Industry Connect- Seminars and Conference rooms are digitally equipped where guest lectures, expert talks and various competitions are regularly organized for students.
- Online quiz-Faculties prepare an online quiz for students after the completion of each unit with the help of GOOGLE FORMS.
- Video Lecture Capture- Recording of video lectures is made available to students through Impartus for long-term learning and future referencing.

File Description	Documents
Provide link for webpage describing ICT enabled tools including online resources for effective teaching and learning process	https://s3.ap-south-1.amazonaws.com/www.ms rit-iqac.com/assets/AQAR+DOCS/MSRIT-Short- URL's.pdf
Upload any additional information	<u>View File</u>

#### 2.3.3 - Ratio of students to mentor for academic and other related issues

#### 2.3.3.1 - Number of mentors

308

File Description	Documents
Upload year-wise number of students enrolled and full-time teachers on roll	<u>View File</u>
Circulars with regard to assigning mentors to mentees	<u>View File</u>

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## 2.3.4 - Preparation and adherence to Academic Calendar and Teaching Plans by the institution Preparation and Adherence of Academic Calendar:

The institution prepares the academic calendar every year in advance. The coverage of academic calendar covers the list of examination dates, seminars, conferences, guest lectures, workshops and industrial visits holidays, vacation dates, festivals, etc. The academic calendar provides the total effective working days available in a given semester. Then the director and senior colleagues prepare the timetable by correlating the working days available and coverage of the curriculum of the subjects. Thus the academic calendar monitors the effective delivery of the program with academic and business inputs.

Preparation and Adherence of Teaching Plan:

The concerned faculties prepare teaching plans for their respective subjects for 30 hours. These 30 hours are distributed among classroom teaching, case studies, role play, workshops and lab sessions as per the subject requirements. These plans are made in advance and serve as guides for conducting sessions. The Principal and HODs check the progress of each course and ensure the timely and effective completion of a course in the specified time frame with a perfect blend of practical and theoretical inputs.

File Description	Documents
Upload the Academic Calendar and Teaching Plans during the year	<u>View File</u>

#### 2.4 - Teacher Profile and Quality

#### 2.4.1 - Number of full-time teachers against sanctioned posts during the year

384

File Description	Documents
Year-wise full-time teachers and sanctioned posts for the year	<u>View File</u>
List of the faculty members authenticated by the Head of HEI	No File Uploaded
Any additional information	<u>View File</u>

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## 2.4.2 - Number of full-time teachers with PhD/ D.M. / M.Ch. / D.N.B Super-Specialty / DSc / DLitt during the year

58

File Description	Documents
List of number of full-time teachers with PhD./ D.M. / M.Ch. / D.N.B Super-Specialty / D.Sc. / D.Litt. and number of full-time teachers for 5 years	<u>View File</u>
Any additional information	<u>View File</u>

## 2.4.3 - Total teaching experience of full-time teachers in the same institution: (Full-time teachers' total teaching experience in the current institution)

14

File Description	Documents
List of teachers including their PAN, designation, Department and details of their experience	<u>View File</u>
Any additional information	<u>View File</u>

#### 2.5 - Evaluation Process and Reforms

## 2.5.1 - Number of days from the date of last semester-end/ year- end examination till the declaration of results during the year

12

File Description	Documents
List of Programmes and the date of last semester-end / year-end examinations and the date of declaration of result	<u>View File</u>
Any additional information	<u>View File</u>

## 2.5.2 - Number of students' complaints/grievances against evaluation against the total number who appeared in the examinations during the year

17

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File Description	Documents
Upload the number of complaints and total number of students who appeared for exams during the year	<u>View File</u>
Upload any additional information	<u>View File</u>

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

Examination system is completely IT integrated (E-sutra software) which enables the system for the fast processing of registration, conduction of examination, evaluation, attainment of outcomes, announcement of results and printing of grade cards.

Examination Procedures for Continuous Internal Evaluation(CIE) is as below:

- 1. CIE is conducted as per the academic calendar for 50 marks.
- 2. Students wise progress report is generated after every test and the same is communicated.

Under graduate (Semester End Examination) -

- 1. The student registers for the examination online.
- 2. The eligible students list and their admission tickets are printed by the automation system.
- 3. The results are generated after completion of valuation process.
- 4. Moodle: Used to conduct quizzes for the purpose of Continuous Internal Assessment (CIA)

Post Graduate -

- 1. The steps for the pre-examination process are as per the undergraduate examination.
- 2. The bar coded answer books are subjected to double evaluation & marks entered by the evaluators are printed and marks sheet are

submitted along with the packets.

3. The system decides the answer books to be subjected to third evaluation based on the Institution norms.

Reforms impact on Examination process:

- 1. Increased confidentiality, reduction of manual entry & minimization of mistakes in the evaluation process.
- 2. Course attainments and other OBE analysis is carried out precisely and reports are generated.
- 3. Results are announced on institutional website.
- 4. A digital repository with backup is maintained which enables quick document retrieval for the purpose of certifications & printing certificates.
- 5. Enhancement of credibility of examination process.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	https://msrit.edu/examination.html#exam- section

#### 2.6 - Student Performance and Learning Outcomes

2.6.1 - Programme Outcomes and Course Outcomes for all Programmes offered by the institution are stated and displayed on the website and communicated to teachers and students

Programme Outcomes (POs) are the statements which describe the qualities/competencies of a graduateacquired throughout the programme. POs are derived from the graduate attributes, which vary from UG toPG programmes. All the POs are defined based on the knowledge, skill and attitude components. The statements of POs are defined by the National Board of Accreditation for Engineering, MBA and MCAprogrammes. Programme Specific Outcomes (PSOs) for UG programme explain the competency of the programme which are derived from the core curriculum. The maximum number of PSOs are limited to 3 to 4.

Course outcomes (COs) describe the competencies which will be gained by the student through the course. The course outcomes are

defined for all theory subjects, laboratory and projects. Number of COs can varyfrom 3 to 6 depending the course content. COs are defined based on the Bloom's Taxonomy by the coursecoordinator. The COs are mapped to appropriate programme outcomes with a proper weightage from 1 to 3. Project work is mapped to majority of the programme outcomes.

POs, PSOs and COs are displayed in the following:

• College website: http://www.msrit.edu

The syllabus of all programs offered by the department is uploaded on the College website.

File Description	Documents
Upload COs for all courses (exemplars from the Glossary)	<u>View File</u>
Upload any additional information	No File Uploaded
Link for additional Information	http://www.msrit- iqac.com/Syllabus 21-22.html

#### 2.6.2 - Attainment of Programme Outcomes and Course Outcomes as evaluated by the institution

The Departments have designed the curriculum taking into consideration all the POs and PSOs. Thecurriculum strongly maps to all the POs and PSOs. The course outcomes (COs) are mapped with POs andPSOs with weightage (3 - high, 2-moderate and 1-Low) for the conformity. The COs are designedconsidering the Bloom's Taxonomy. ThePOs and PSOs represent the competency gained through the programme. The mapping of COs to POs andPSOs represents the contribution of courses towards the attainment of POs and PSOs of the programme. The COs are measured using direct and indirect assessment techniques. Direct Assessment includesContinuous Internal Evaluation, Semester End Examination, project etc. The Indirect assessment is carried out through course end surveys.

The CIE consisting of internal assessment questions, quizzes, assignments and laboratory courses are mapped to COs. The COs in turn are mapped to the POs. A process similar to CIE mapping is followed for SEE. Rubrics are developed for the project, seminar, case study and internships. The course endsurvey questions are framed by the course coordinator to find the attainment level of course. The weightage of components for CO attainment is 40% for

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CIE, 40% for SEE and 20% for indirect assessment.

A sample of attainment of Programme Outcomes and Course Outcomes as evaluated by the institution is attached for your kind reference.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	http://www.msrit.edu

#### 2.6.3 - Pass Percentage of students

## 2.6.3.1 - Total number of final year students who passed in the examinations conducted by Institution

1389

File Description	Documents
Upload list of Programmes and number of students appear for and passed in the final year examinations	<u>View File</u>
Upload any additional information	<u>View File</u>
Paste link for the annual report	https://assessmentonline.naac.gov.in/public/index.php/admin/get_file?file_path=eyJpdil6IldqcDd0NnNZaVA3NU02THZkMi9KUFE9PSIsInZhbHVlIjoiRzMxKzFURFZQRVErRWhwK1V1RTZiRmozVGFIdUhSZUY5UWVTSGZjbD14TUJ0NmoydE5QdXprZ1BKeW9MOSthUyIsIm1hYyI6ImFiMDJjYTcyNGViZTVjYjI3YjNhZWE4NDd1MjgwMWViYTk1Yjd1YTg3NTY5ZTA1MT1hMTJhMTUzMTIwODMyNGYiLCJ0YWciOiIifQ==

#### 2.7 - Student Satisfaction Survey

## 2.7.1 - Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design its own questionnaire). Results and details need to be provided as a weblink

https://msrit-bucket.s3.us-west-2.amazonaws.com/Uploads/Student+Sa
tisfaction+Survey+report+-2022+(21-09-2022).pdf

#### 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

MSRIT strongly promotes research activities among faculty and students. It is focused on the following Six themes.

Industry oriented R&D

To ensure that faculty research is linked to leading industries, 8 Centre of Excellences have already been established at MSRIT. The main objective is to bring faculty from diverse backgrounds in order to foster interdisciplinary research and improve external funding/consultancy.

Seed Funding

Since October 2019 MSRIT provides seed funding of more than Rs 5 lakhs to enable faculty to experiment with innovative ideas & to develop novel prototypes and algorithms.

Financial assistance to full-time PhD scholars

MSRIT also provides support to full-time PhD scholars up to Rs 25,000 per month.

Incentives for quality publications

Since May 2017 MSRIT has started providing incentives to faculty who have published in quality journals derived directly from Scimago (Q1 to Q4).

Intellectual Property Policy

The Intellectual Property Policy set by MSRIT sets a framework for the protection of all IPR generated at MSRIT.

Establishment of a R&D group

Finally, MSRIT has established a Research Centre, with two coordinators (Dr. N Sriram and Dr. KRV Subramanian) and with 14 full time faculty identified from all engineering disciplines to focus on research & to promote research.

File Description	Documents
Upload the Minutes of the Governing Council/ Syndicate/Board of Management related to research promotion policy adoption	<u>View File</u>
Provide URL of policy document on promotion of research uploaded on the website	https://msrit-bucket.s3-us-west-2.amazonaws.com/Uploads/ResearchPolicy.pdf
Any additional information	<u>View File</u>

#### 3.1.2 - The institution provides seed money to its teachers for research

## 3.1.2.1 - Seed money provided by the institution to its teachers for research during the year (INR in lakhs)

#### 18.7

File Description	Documents
Minutes of the relevant bodies of the institution regarding seed money	<u>View File</u>
Budget and expenditure statements signed by the Finance Officer indicating seed money provided and utilized	<u>View File</u>
List of teachers receiving grant and details of grant received	<u>View File</u>
Any additional information	<u>View File</u>

## ${\bf 3.1.3 - Number\ of\ teachers\ who\ were\ awarded\ national\ /\ international\ fellowship(s)\ for\ advanced\ studies/research\ during\ the\ year}$

00

File Description	Documents
e-copies of the award letters of the teachers	<u>View File</u>
List of teachers and details of their international fellowship(s)	<u>View File</u>
Any additional information	<u>View File</u>

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#### 3.2 - Resource Mobilization for Research

## 3.2.1 - Grants received from Government and Non-Governmental agencies for research projects, endowments, Chairs during the year (INR in Lakhs)

209.10139

File Description	Documents
e-copies of the grant award letters for research projects sponsored by non-governmental agencies/organizations	<u>View File</u>
List of projects and grant details	<u>View File</u>
Any additional information	<u>View File</u>

#### 3.2.2 - Number of teachers having research projects during the year

26

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	https://s3.ap-south-1.amazonaws.com/www.ms rit-igac.com/assets/AQAR+DOCS/3.2.2.pdf
List of research projects during the year	<u>View File</u>

#### 3.2.3 - Number of teachers recognised as research guides

58

File Description	Documents
Upload copies of the letter of the university recognizing teachers as research guides	<u>View File</u>
Institutional data in Prescribed format	<u>View File</u>

## **3.2.4** - Number of departments having research projects funded by Government and Non-Government agencies during the year

14

File Description	Documents
Supporting document from Funding Agencies	<u>View File</u>
Paste link to funding agencies' website	https://dst.gov.in/
Any additional information	<u>View File</u>

#### 3.3 - Innovation Ecosystem

3.3.1 - Institution has created an ecosystem for innovations and creation and transfer of knowledge supported by dedicated centres for research, entrepreneurship, community orientation, incubation, etc.

The Entrepreneurship Development Cell (EDC) at MSRIT was established in July 2003. EDC-MSRIT Bangalore is a Platform for MSRIT students dedicated to the development of multidimensional skills. It invites various eminent entrepreneurs to deliver lectures to educate the students about entrepreneurship. Guest Lectures, Workshops, etc., are conducted throughout the year to involve students in activities that are essential to be an entrepreneur. E-Cell also actively incubates start-up ideas by creating the required ecosystem to be an entrepreneur. E-Cell functions to guide the budding Entrepreneurs in their endeavour. Many ideas are incubated at EDC leading up to start-Ups.

The Vision and Mission of the EDC are

#### Vision

To provide and sustain entrepreneurial activities to foster startup culture and strive to implement environmental, social and economic solutions.

#### **MISSION**

- -To generate new and innovative ideas.
- -To organize entrepreneurial Conclaves/ Ideathon / Hackathon / Competitions.
- -To convert innovative ideas into tangible products and solutions.
- -To encourage start-ups and their ecosystem.

Highlights of EDC.

- · Currently, four prototypes are being incubated.
- EDC has collaborations with Confederation of Indian Industry(CII) and National Entrepreneurship Network(NEN), Wadhwani foundation.
- EDC has a budget allocation of Rs.17.0-18.0 Lakhs and has a built-up area of around 3000 sq. Ft.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://msrit-bucket.s3.us-west-2.amazonaw s.com/Supporting/EDC/2021-22.pdf

## 3.3.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR), Entrepreneurship and Skill Development during the year

48

File Description	Documents
Report of the events	<u>View File</u>
List of workshops/seminars conducted during the year	<u>View File</u>
Any additional information	<u>View File</u>

#### 3.4 - Research Publications and Awards

# 3.4.1 - The Institution ensures implementation of its Code of Ethics for Research uploaded in the website through the following: Research Advisory Committee Ethics Committee Inclusion of Research Ethics in the research methodology course work Plagiarism check through authenticated software

A. All of the above

File Description	Documents
Code of Ethics for Research, Research Advisory Committee and Ethics Committee constitution and list of members of these committees, software used for plagiarism check	<u>View File</u>
Any additional information	<u>View File</u>

## 3.4.2 - Number of PhD candidates registered per teacher (as per the data given with regard to recognized PhD guides/ supervisors provided in Metric No. 3.2.3) during the year

#### 3.4.2.1 - Number of PhD students registered during the year

70

File Description	Documents
URL to the research page on HEI website	https://msrit.edu/research/phd/index.html# overview
List of PhD scholars and details like name of the guide, title of thesis, and year of registration	<u>View File</u>
Any additional information	No File Uploaded

## 3.4.3 - Number of research papers per teacher in CARE Journals notified on UGC website during the year

#### 3.833

File Description	Documents
List of research papers by title, author, department, and year of publication	<u>View File</u>
Any additional information	No File Uploaded

## 3.4.4 - Number of books and chapters in edited volumes / books published per teacher during the year

0.28

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

## 3.4.5 - Bibliometrics of the publications during the year based on average Citation Index in Scopus/ Web of Science/PubMed

#### 3.4.5.1 - Total number of Citations in Scopus during the year

#### 3858

File Description	Documents
Any additional information	<u>View File</u>
Bibliometrics of the publications during the year	<u>View File</u>

## 3.4.6 - Bibliometrics of the publications during the year based on Scopus/ Web of Science – h-Index of the University

#### 3.4.6.1 - h-index of Scopus during the year

71

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

#### 3.5 - Consultancy

## 3.5.1 - Revenue generated from consultancy and corporate training during the year (INR in lakhs)

107.0197

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

## 3.5.2 - Total amount spent on developing facilities, training teachers and clerical/project staff for undertaking consultancy during the year

#### 71.796575

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

#### 3.6 - Extension Activities

3.6.1 - Extension activities carried out in the neighbourhood sensitising students to social issues for their holistic development, and the impact thereof during the year

MSRIT National Service Scheme:

The National Service Scheme (NSS) Unit of MS Ramaiah Institute of Technology was first started in the year 1999 & has adopted Avathi village near Devanahalli under Unnat Bharat Abhiyaan and Swach Bharat Abhiyaan scheme. More than 15 projects are under taken by the students to provide sanitation and pure drinking water.

#### Annual Blood Donation Camp

• Camps have various activities such as recycling new books

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from used ones.

- E-waste collection drives are held, and a plantation drive are organized. NSS-student-volunteers visit slums and conduct dental and eye check-ups.
- Skill development programs for drop-out students.
- Visits to slum areas: Skill development programs are conducted for all age groups.

Please visit http://www.msrit.edu/support/nss.html

IEEE Outreach Activities:

The IEEE MSRIT Student Branch was inaugurated in November 2003. The branch endeavors to enrich the students of MSRIT and other Engg colleges with the latest developments in various fields of technology and research. IEEE MSRIT has various chapters namely Women in Engineering Affinity Group, Robo-RIT, Power and Energy Society (PES) student chapter, Computer Intelligence Society student chapter, Engineering in Medicine and Biology Society student chapter and Signal processing student chapter.

For further details, please visit our web page https://site.ieee.org/sb-ritb/

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.msrit.edu/support/nss.html

## 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 the year

6

File Description	Documents
Number of awards for extension activities in during the year	<u>View File</u>
e-copy of the award letters	<u>View File</u>
Any additional information	<u>View File</u>

#### 3.6.3 - Number of extension and outreach programmes conducted by the institution through

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NSS/NCC/Red Cross/YRC, etc. during the year (including Government-initiated programmes such as Swachh Bharat, AIDS Awareness, and Gender Sensitization and those organised in collaboration with industry, community and NGOs)

3

File Description	Documents
Reports of the events organized	<u>View File</u>
Any additional information	<u>View File</u>

## 3.6.4 - Number of students participating in extension activities listed in 3.6.3 during the year 955

File Description	Documents
Reports of the events	<u>View File</u>
Any additional information	<u>View File</u>

#### 3.7 - Collaboration

## 3.7.1 - Number of collaborative activities during the year for research/ faculty exchange/ student exchange/ internship/ on-the-job training/ project work

462

File Description	Documents
Copies of documents highlighting collaboration	<u>View File</u>
Any additional information	<u>View File</u>

3.7.2 - Number of functional MoUs with institutions of national and/or international importance, other universities, industries, corporate houses, etc. during the year (only functional MoUs with ongoing activities to be considered)

23

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File Description	Documents
e-copies of the MoUs with institution/ industry/ corporate house	<u>View File</u>
Details of functional MoUs with institutions of national, international importance, other institutions etc. during the year	<u>View File</u>
Any additional information	<u>View File</u>

#### 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 equipments, etc.

The campus has a built area of 85042.32 sq.m. catering to the needs of all students and faculty. The Institution has a total 125 classrooms, 103 laboratories, central library, 1 auditorium, 5 seminar halls, 4 board rooms, and playground. The computing facilities (3605 Computers) is more than adequate for the teaching learning process. All the classrooms are equipped with Wi-fi and LCD. About 6 classrooms are equipped with recording facility and used extensively for recording lectures. The total Internet Bandwidth available is 1800mbps. Effective utilization of infrastructure is ensured through appointment of adequate and well qualified lab technicians/system administrator. The available physical infrastructure is optimally utilized beyond regular college hours to conduct certificate courses, co-curricular activities/extra - curricular activities, proctor meetings, placement training classes, seminars, conferences, etc. Every department has dedicated and adequate number of laboratories and classrooms more than VTU and AICTE norms. Each laboratory is equipped with sufficient number of required experimental setups. The Central library is equipped with a good number of reference books and journals. Every department has computer laboratories housed in different blocks are utilized for on-line examinations, aptitude tests, project work and competitions by students of all departments.

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File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://www.easytourz.com/BT- EmabedTour/all/87002a26d035a1f7

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

#### Sports Facilities

The Department of Physical Education is headed by Physical Director and assisted by individual coaches for football, hockey, volleyball, cricket, basketball, etc. The Department aims to provide the students with wide range of sports recreation and leisure activities for students, staff and faculty. The college offers several facilities on campus to cater to the physical development of students with provision for both indoor and outdoor games. Carom, Chess and Table tennis facilities are housed within an indoor sports complex. The college has courts for Basketball and Tennis and a ground for football, hockey and many other sports.

#### Cultural Activities

MSRIT strongly believes in the holistic development of students. This is made possible by encouraging them to engage in various cultural activities such as music, theatre, literary, visual and fine arts, etc. apart from Sports, NSS, Entrepreneurship Cell and other similar pursuits. It is the only Institution that has created an exclusive department, known as the Department of Extra-Curricular Activities (DECA), to oversee all such activities of students on campus and off-campus throughout the year. Every year M. S. Ramaiah Institute of Technology organizes UDBHAV, one of the best college cultural fests of South India.

File Description	Documents
Geotagged pictures	<u>View File</u>
Upload any additional information	<u>View File</u>
Paste link for additional information	https://www.msrit.edu/support/sports.html

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#### 4.1.3 - Number of classrooms and seminar halls with ICT-enabled facilities

#### 131

File Description	Documents
Upload any additional information	<u>View File</u>
Upload Number of classrooms and seminar halls with ICT enabled facilities (Data Template)	<u>View File</u>

# 4.1.4 - Expenditure for infrastructure augmentation, excluding salary, during the year (INR in Lakhs)

#### 2456.37

File Description	Documents
Upload audited utilization statements	<u>View File</u>
Details of Expenditure, excluding salary, during the years	<u>View File</u>
Any additional information	<u>View File</u>

#### 4.2 - Library as a Learning Resource

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

- The MSRIT Library is spread across 6 Locations spread across the campus with a carpet area of 40350 Sq. Ft with a total seating capacity of libraries is 1,265.
- The collection comprises of 1,17,802 volumes of books with 38,512 titles along with 23,956 e-Books with perpetual access to 65 National and International Printed Journals predominantly related to Engineering, Technology, Management and allied subjects.
- The Library subscribes to 7,886 full-text e-journals from ICE, IEL Online Taylor & Francis, Springer, etc.
- The Library resources have been completely Bar Coded and automated using LIBSYS 7 (Rel.3). Library provides a Technology Platform and Database of Plagiarism Checking Tool "Turnitin Web Tool to support the R & D activities of students and faculty.
- Digital Libraries that are set up are well facilitated with

- 132 high-end configured computer systems that are connected to high bandwidth network.
- Remote access to e-resources has been facilitated by the library through the services of KNIMBUS Digital Library Platform with Remote Access Solution.
- Name of the ILMS software: LIBSYS (INTEGRATED LIBRARY MANAGEMENT SOFTWARE)
- Name of the Digital Library Software: DSpace on UBUNTU OS
- Remote Access: Knimbus Federated Search Engine
- Standards: BSB, BIS Standards
- Database: SCOPUS
- Grammar Checker: NetAnalytiks-Sententia

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://www.msritlibrary.org/

# 4.2.2 - Institution has access to the following: A. Any 4 or more of the above e-journals e-ShodhSindhu Shodhganga Membership e-books Databases Remote access to e-resources

File Description	Documents
Details of subscriptions like e- journals, e-books, e- ShodhSindhu, Shodhganga membership	<u>View File</u>
Upload any additional information	<u>View File</u>

# 4.2.3 - Expenditure on purchase of books/ e-books and subscription to journals/e-journals during the year (INR in lakhs)

89.68

File Description	Documents
Audited statements of accounts	<u>View File</u>
Any additional information	<u>View File</u>
Details of annual expenditure for purchase of books/e-books and journals/e- journals during the year (Data Template)	<u>View File</u>

#### 4.2.4 - Usage of library by teachers and students (footfalls and login data for online access)

#### 4.2.4.1 - Number of teachers and students using the library per day during the year

#### 1657

File Description	Documents
Upload details of library usage by teachers and students	<u>View File</u>
Any additional information	<u>View File</u>

#### 4.3 - IT Infrastructure

4.3.1 - Institution has an IT policy covering Wi-Fi, cyber security, etc. and has allocated budget for updating its IT facilities

The Department of IT Services is a one stop hub for all things related to IT infrastructure of the Institution. It houses an airconditioned server room with adequate power backup. Internet Gateway is also located here. The other servers housed here are:

1.Biometric Attendance Server 2. DHCP Server 3. Web (Juke) Server 4. Student Information System Server 5. Moodle/eLearning Server.6. Mathematica Server 7. Wi-Fi Management Console (Server) 8. NVR (Network Video Recorder).

It is responsible for overseeing of any installation/upgradation/maintenance of the computer

systems/networks/CCTV cameras/Wi-Fi access points within the institution. The department has qualified technical support staff for effective maintenance of the same.

The entire campus is fully Wi-Fi enabled with internet speed of 1000 Mbps. A separate leased line internet connection of 600 Mbps is utilized for the wired network within the campus. The traffic through these networks is filtered through the firewall (Sophos

Xg), which prevents any malicious/unwanted content from entering the network.

Year 2021-2022:

Leased Line 600 MBPS

Wi-Fi 1200 MBPS

Total Bandwidth 1800 MBPS

Number of computers available: 3605

MSRIT also has a digital library infrastructure. The institute has subscribed to various e-journals, digital video lectures (NPTEL and others), which is renewed from time to time

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://msrit.edu/facilities/internet.html

#### 4.3.2 - Student - Computer ratio

Number of Students	Number of Computers
5860	3605

File Description	Documents
Upload any additional information	<u>View File</u>

# 4.3.3 - Bandwidth of internet connection in the Institution and the number of students on campus

A. ?50 Mbp	S
------------	---

File Description	Documents
Details of bandwidth available in the Institution	<u>View File</u>
Upload any additional information	<u>View File</u>

#### 4.3.4 - Institution has facilities for e-content A. All four of the above

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development: Facilities available for e-content development Media Centre Audio-Visual Centre Lecture Capturing System (LCS) Mixing equipments and software for editing

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://s3.ap-south-1.amazonaws.com/www.ms rit-iqac.com/assets/AOAR+DOCS/MSRIT-Short- URL's.pdf
List of facilities for e-content development (Data Template)	<u>View File</u>

#### 4.4 - Maintenance of Campus Infrastructure

# 4.4.1 - Expenditure incurred on maintenance of physical and academic support facilities, excluding salary component, during the year (INR in lakhs)

#### 2456.37

File Description	Documents
Audited statements of accounts	<u>View File</u>
Upload any additional information	<u>View File</u>

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

M S Ramaiah Institute of Technology Maintenance Department maintains the physical infrastructure of the institute.

Potable water supply

The water source for MSRIT is bore wells. The groundwater is tapped and is used for domestic purposes.

Rainwater Harvesting

M.S. Ramaiah Institute of Technology has 6 blocks & each block has a rainwater harvesting tank and the collected rainwater is used for gardening purposes.

#### Wastewater treatment

M. S. Ramaiah Institute of Technology has a wastewater treatment plant, with a capacity to treat 2.5 lakh litres of wastewater per day using SBR technology.

#### Parking arrangement in MSRIT

The Institution provides four-wheeler and two-wheeler parking facilities for the staff and students with a parking capacity is 70 Cars and 1800 2-wheelers.

#### Solid waste disposal

The solid waste generated inside the institution premises is segregated & wet waste is directly disposed to BBMP lorries while the dry waste consisting are disposed to scrap vendors for recycling.

#### e-waste disposal

The authorized vendor is allowed to collect the e-waste for treatment, recycling and disposal at the end of each semester.

#### Chemical Waste Treatment

The chemical wastewater from laboratories are being treated separately in an effluent treatment plant (ETP) & is mixed with domestic sewage.

#### Electric Power Backup:

Solar panels are installed at the MSRIT campus with a capacity of 431kWp. This caters to the 47% electric power needs of the Institute

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://msrit.edu/facilities/others.html

#### STUDENT SUPPORT AND PROGRESSION

#### **5.1 - Student Support**

# 5.1.1 - Number of students benefitted by scholarships and freeships provided by the Government during the year

#### 1264

File Description	Documents
Upload self-attested letters with the list of students receiving scholarships	<u>View File</u>
Upload any additional information	<u>View File</u>

# 5.1.2 - Number of students benefitted by scholarships and freeships provided by the institution and non-government agencies during the year

#### 231

File Description	Documents
Upload any additional information	<u>View File</u>
Institutional data in prescribed format	<u>View File</u>

5.1.3 - The following Capacity Development and Skill Enhancement activities are organised for improving students' capabilities Soft Skills Language and Communication Skills Life Skills (Yoga, Physical fitness, Health and Hygiene)
Awareness of Trends in Technology

B. Any 3 of the above

File Description	Documents
Link to Institutional website	https://www.msrit.edu/
Details of capability development and schemes	<u>View File</u>
Any additional information	<u>View File</u>

# 5.1.4 - Number of students benefitted from guidance/coaching for competitive examinations and career counselling offered by the institution during the year

1147

File Description	Documents
Any additional information	<u>View File</u>
Number of students benefited by guidance for competitive examinations and career counseling during the year (Data Template)	<u>View File</u>

# 5.1.5 - The institution adopts the following mechanism for redressal of students' grievances, including sexual harassment and ragging: Implementation of guidelines of statutory/regulatory bodies Creating awareness and implementation of policies with zero tolerance Mechanism for submission of online/offline students' grievances Timely redressal of grievances through appropriate committees

#### A. All of the above

File Description	Documents
Minutes of the meetings of students' grievance redressal committee, prevention of sexual harassment committee and Anti- ragging committee	<u>View File</u>
Details of student grievances including sexual harassment and ragging cases	<u>View File</u>
Upload any additional information	No File Uploaded

#### 5.2 - Student Progression

#### 5.2.1 - Number of outgoing students who got placement during the year

#### 1147

File Description	Documents
Self-attested list of students placed	<u>View File</u>
Upload any additional information	<u>View File</u>

#### 5.2.2 - Number of outgoing students progressing to higher education

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#### 151

File Description	Documents
Upload supporting data for students/alumni	<u>View File</u>
Details of students who went for higher education	<u>View File</u>
Any additional information	<u>View File</u>

# 5.2.3 - Number of students qualifying in state/ national/ international level examinations during the year

# 5.2.3.1 - Number of students who qualified in state/ national/ international examinations (e.g.: IIT-JAM/NET/SET/JRF/ GATE /GMAT /CAT/ GRE/ TOEFL/Civil Services/State government examinations) during the year

#### 151

File Description	Documents
Upload supporting data for students/alumni	<u>View File</u>
Any additional information	<u>View File</u>

#### 5.3 - Student Participation and Activities

# 5.3.1 - Number of awards/medals for outstanding performance in sports and/or cultural activities at inter-university / state /national / international events (award for a team event should be counted as one) during the year

57

File Description	Documents
e-copies of award letters and certificates	<u>View File</u>
Any additional information	<u>View File</u>

### 5.3.2 - Presence of an active Student Council and representation of students in academic and administrative bodies/committees of the institution

Institute provides opportunity to students to represent on academic and administrative bodies/committees. Every year, all the departments identifies two representatives from each semester preferably one boy and one girl. Principal meets all the representatives at least once in a semester after the first

internals and discusses about the courses offered, teaching methodology and the evaluation process. Institute encourages number of activities that are hosting under the banner of different clubs/forums/professional societies. Throughout the year numerous activities are organized for students to trail their hobbies. To mention few, institute regularly sponsors students team to participate in SAE Aero design west, USA, UAV competition at Maryland and Bharath Formula Electric Karting competition. The students participate in the Faculty feedback every semester and institute feedback every year. All departments organize at least two guest lectures every semester delivered by the industrial experts and/or academicians from institutes of eminence which helps students to interact and expose themselves to state of t heart research. In most of the departments, at least two students from the final year are invited for the BOS meeting to share their views on the curriculum and evaluation. Apart from this, 2 student members are invited for the IQAC meeting. The students participate in community services and extension activities through NSS, women cell and clubs. Every year, institute recognizes the best student from each programme and best outgoing student from the institute. MSRIT has also embarked gold medal for the rank holders from each programme.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://msrit.edu/

#### 5.3.3 - Number of sports and cultural events / competitions organised by the institution

6

File Description	Documents
Report of the event	<u>View File</u>
List of sports and cultural events / competitions organised per year	<u>View File</u>
Upload any additional information	No File Uploaded

#### 5.4 - Alumni Engagement

5.4.1 - The Alumni Association and its Chapters (registered and functional) contribute significantly

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to the development of the institution through financial and other support services

The alumni association of MSRIT has served as a bridge in promoting interactions and fostering relationships among alumni, students, staff and management. There is a separate alumni portal (www.msritalumni.com) where alumni can interact. The portal has more than 14500 members from all over the world. Current activities of the association are:

- 1. Scholarships to students: The association initiated Merit and Means scholarships. It was initiated to financially assist the deserving students of MSRIT based on 80 of their merit and 20 of their means. The amount of scholarship per student is Rs 10000/ and every year around 40 to 50 students are awarded this scholarship.
- 2. Krishna P Godasi Scholarship Grant full tuition fees for the entire B.E. / B. Arch course provided to students who meet the required criteria. About 20-30 students are awarded this scholarship every year.
- 3. GMW Aspire Foundation Scholarship Provides a Scholarship of Rs.1,00,000 through GMW Aspire Foundation which is an initiative by our distinguished alumni Sri Jasbir Singh.
- 4. Project Funding: MSRIT AA funds an amount of Rs. 1.3 to 1.5 Lakh every year towards UG / PG Student Projects.
- 5. Gold Medals: Gold Medals instituted by alumni in various departments are awarded to first-rank holders during the graduation day ceremony.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	https://www.msritalumni.com/page/Scholarsh ips.dz

# **5.4.2 - Alumni's financial contribution** during the year

#### A. ? 15 Lakhs

File Description	Documents
Upload any additional information	<u>View File</u>

#### 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
- M. S. Ramaiah Institute of Technology was established in the year 1962.

Vision: To be an Institution of International Eminence, renowned for imparting quality technical education, cutting-edge research and innovation to meet global socio-economic needs.

Mission: MSRIT shall meet the global socio economic needs through

- 1. Imparting quality technical education by nurturing a conducive learning environment through continuous improvement and customization.
- 2. Establishing research clusters in emerging areas in collaboration with globally reputed organizations.
- 3. Establishing innovative skills development, technoentrepreneurial activities and consultancy for socio-economic needs.

The Vision and Mission of the Institution is to provide quality technical education, cutting-edge research and innovation to address socio-economic needs. To meet these objectives, the institution has formed various bodies/committees. The administration is supervised by the Governing Body (GB) & constitutes the Directors of the Institution, eminent academicians, renowned industrialists, the Principal and a few senior faculties. The GB approves the Vision and Mission, strategic plan, establishment of new programs of study leading to degrees, plan for the infrastructure development of the institute. The GB meets twice a year and reviews the progress /growth of the institution The institution has well defined organizational structure.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	https://msrit.edu/gov-others.html

6.1.2 - Effective leadership is reflected in various institutional practices such as decentralization and participative management

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M S Ramaiah Institute of Technology practices a culture of participative management (decentralized structure), by involving faculty members in a number of administrative roles in various academic and non-academic committees and many other decision-making committees of the Institute.

#### Decentralization of Administrative/Academic Powers:

The Principal leads the academic and administrative process in the institution. Vice-Principal, Registrar Academic, Registrar Administration, Registrar Admission, Controller of Examination and Heads of the Department also help the Principal in academic and administrative activities.

Some of the senior faculty are members of various decision-making bodies and committees such as Governing Body, Academic Council, Board of Studies, R&D committee, IQAC.

#### Delegation of Financial Powers:

The Chief Executive and Chief of Finance lead the finance process. The Finance Committee helps in executing the financial activities & comprises CE, CoF, the Principal and a few senior faculties. The Finance Committee allocates the budget to each department in discussion with the department heads & is appraised to the Governing Body for approval.

All HODs are financially permitted to take financial decisions up to Rs. 5.00 Lakh per annum.

The Principal of the institute is financially permitted to utilize up to Rs.25.00 Lakh per annum for the day-to-day activities in the institution.

File Description	Documents
Upload strategic plan and deployment documents on the website	<u>View File</u>
Upload any additional information	<u>View File</u>
Paste link for additional Information	https://msrit.edu/gov- others.html#governing

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

6.2.1 - The institutional Strategic/ Perspective plan has been clearly articulated and implemented

The strategic plan of M S Ramaiah Institute of Technology (MSRIT) for 2020-30 is based on recognizing the Vision, Mission and core values of the institute. Goals and strategies were developed to achieve significant progress towards the institute's aspiration of becoming one of the nation's leading technical institute in teaching, research and development. The strategic plan emphasizes the institution's role as a premier institution that provides quality technical education and career guidance to a broad array of students.

The strategic plan of MSRIT identifies four key themes as follows:

Theme 1: Quality of Teaching Learning process with Outcome Based Education.

Theme 2: Quality Research, Innovation, and Creativity programs.

Theme 3: Outreach and Engagement.

Theme 4: Efficient and Effective Management

Quality Research, Innovation, and Creativity programs:

There has been a major thrust on R&D in the past decade at MSRIT. It was planned to improve research culture among faculty and improve the number of full time Ph. D scholars. Many students are taking up internships abroad. 9 Centre of Excellences are being established to cater to the research requirements and to enhance fulltime Ph. D scholars. Faculty are provided with Seed grant (more than 5 lakhs) to initiate in-house research.

File Description	Documents
Strategic Plan and deployment documents on the website	<u>View File</u>
Paste link for additional information	<pre>http://www.msrit- iqac.com/assets/img/RoadMapPrint.pdf</pre>
Upload any additional information	<u>View File</u>

6.2.2 - The functioning of the various institutional bodies is effective and efficient as visible from

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the policies, administrative set-up, appointment and service rules, procedures, etc.

The institution has a well-defined organizational structure and roles and responsibilities. The institution has well-defined rules for effective governance in Administration and Academic activities.

#### Functions of Governing Body:

- Governing Body normally meets twice a year.
- Approves starting new programs of study leading to degrees.
- Plans the infrastructure development of the Institute.
- Approves the budget submitted by the Finance Committee.

#### Functions of Academic Council:

The Academic Council normally meets once a year. Scrutinize and approve the proposals with or without modification of the Boards of Studies with regard to courses of study, academic regulations, Curricula, syllabi and modifications thereof, instructional and evaluation arrangements, methods, procedures relevant thereto, etc.

#### Functions of Finance Committee:

Finance Committee normally meets once a year to prepare the Budget for the Institute and Autonomous Examinations.

#### Recruitment:

Head of the Departments will submit requirements for faculty to the Principal. An advertisement is given in the leading newspapers. Eligible candidates are called for an interview shortlisted by the department.

#### Promotional Policies:

Normally once a year, Management considers applications from such of those staff members who have improved their qualifications (for example obtained a Ph. D) and promotes them if they satisfy all the criteria stipulated by AICTE.

File Description	Documents
Paste link to Organogram on the institution webpage	https://msrit-bucket.s3-us- west-2.amazonaws.com/Organogram.png
Upload any additional information	<u>View File</u>
Paste link for additional Information	https://msrit.edu/

# 6.2.3 - Implementation of e-governance in areas of operation: Administration Finance and Accounts Student Admission and Support Examination

#### A. All of the above

File Description	Documents
ERP (Enterprise Resource Planning) Documen	<u>View File</u>
Screen shots of user interfaces	<u>View File</u>
Details of implementation of e- governance in areas of operation	<u>View File</u>
Any additional information	<u>View File</u>

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

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

WELFARE MEASURES FOR TEACHING STAFF

- 1. Encashment of Earned leave as per the norms.
- 2. Support for skill upgradation- provide OOD and registration fees, travel allowance to participate in technical seminars and workshops
- 3. Retirement benefits
- 4. Employees Family Welfare Fund:

Retirement - Principal amount that is contributed to the fund, Incase of death - Rs. 100000/-

5. Medical Insurance to employees and their families and students

Amount spent on medical insurance for teaching and nonteaching staff in the last year is Amount spent on medical insurance for students in the last year is Rs.

- 6. Medical expenses other than health insurance policy is provided for the staff and their family members who are treated in M. S. Ramaiah Hospitals to the maximum amount of Rs. 1,00,000/- per year per member.
- 7. Providing Fee Concession in College Seats to the wards of teaching faculty
- 8. Share is given in consultancy activities for teaching staff
- 9. Festival Advance for non-teaching staff
- 10. Time-bound Increments for non-teaching staff
- 11. Transport facility for staff

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://www.starhealth.in/

# 6.3.2 - Number of teachers provided with financial support to attend conferences / workshops and towards payment of membership fee of professional bodies during the year

16

File Description	Documents
Upload any additional information	<u>View File</u>
Details of teachers provided with financial support to attend conference, workshops etc during the year (Data Template)	<u>View File</u>

# 6.3.3 - Number of professional development / administrative training programmes organized by the Institution for its teaching and non-teaching staff during the year

70

File Description	Documents
Reports of the Human Resource Development Centres (UGC HRDC/ASC or other relevant centres)	<u>View File</u>
Upload any additional information	<u>View File</u>

# 6.3.4 - Number of teachers who have undergone online/ face-to-face Faculty Development Programmes during the year: (Professional Development Programmes, Orientation / Induction Programmes, Refresher Courses, Short-Term Course, etc.)

#### 324

File Description	Documents
Summary of the IQAC report	<u>View File</u>
Reports of the Human Resource Development Centres (UGC ASC or other relevant centers)	<u>View File</u>
Upload any additional information	<u>View File</u>

#### 6.4 - Financial Management and Resource Mobilization

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

Institution conducts internal and external financial audits regularly

The institute conducts regular financial audits. The institute has a formal mechanism for internal and external audits. The accounts are regularly audited to ensure financial compliance.

#### Internal Audit:

The internal audit is a continuous process. The finance committee and the Qualified Auditors from external agencies have been appointed and a team of staff under them do a methodical verification. The team verifies all payments, receipts, vouchers of the cash transactions, ledgers and cashbook. Process audit of the accounts is done by IQAC cell of the institute twice a year.

External Audit: The external auditor/agency, B. N. Subramanya & Co., Charted Accountants, appointed by the Management performs audit of the financial statements of the college. The financial

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records are audited by qualified chartered accountants at the end of each financial year. The financial records are certified i.e., income and expenditures, balance sheet and prepared notes to accounts are certified. The funded projects are also audited by the external auditors. The Institution publishes audited financial statements on the institutions website as information for the concerned people.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://s3.ap-south-1.amazonaws.com/www.ms rit-iqac.com/assets/Financial+Audited+Stat ement+2021-2022.pdf

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

#### 40.35

File Description	Documents
Annual statements of accounts	<u>View File</u>
Details of funds / grants received from non-government bodies, individuals, philanthropists during the year	<u>View File</u>
Any additional information	<u>View File</u>

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

Mobilisation of funds in the institute is through several sources. The primary source is through tuition fees of students. In addition, financial assistance is obtained through external research projects and by carrying out extensive consultancy works. The interest generated on the corpus also contributes towards the income.

#### M.S RAMAIAH INSTITUTE OF TECHNOLOGY

#### INCOME AND EXPENDITURE ACCOUNT

The major part of the expenditure is spent on salaries and other benefits for teaching and non-teaching staff. Various expenditures are planned by taking input from departments and section heads. The budget for departments and sections are prepared by taking procurement of equipment, conduction of workshops and conferences, travel expenses, maintenance of equipment and laboratories. Recurring expenses such as chemicals, glass wares, stationaries are taken in to consideration before finalising the budget every year. The planned budget is scrutinized by the finance committee before approval. Quarterly meetings are conducted to check the expenditure of various departments. The budget for library, seed money for projects, incentive for publications, stipend for full time research scholars, sports, maintenance department, centralised computer maintenance, housekeeping are taken into account before finalising the budget for the financial year. The resources for scholarships are generated through government and non-government organizations.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	https://s3.ap-south-1.amazonaws.com/www.ms rit-iqac.com/assets/Financial+Audited+Stat ement+2021-2022.pdf

#### **6.5 - Internal Quality Assurance System**

6.5.1 - Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing quality assurance strategies and processes visible in terms of incremental improvements made during the preceding year with regard to quality (in case of the First Cycle): Incremental improvements made during the preceding year with regard to quality and post-accreditation quality initiatives (Second and subsequent cycles)

The Internal Quality Assurance Cell of MSRIT has Self-regulated responsibilities, aimed at Continuous quality improvement and achieving overall excellence. M S Ramaiah Institute of Technology has an IQAC Cell and adopts a participatory approach in managing its provisions.

The IQAC has expressively contributed towards improving Curriculum enrichment, Academic Excellence, Teaching and Learning Process, Evaluation Methods and Research atmosphere in the institution. The goals defined & two of the practices of IQAC are as follows:

1. Academic Audits: Regular audits are conducted internally after every semester by senior faculty. The coordinator identifies the auditors to all the departments.

2. Internal Audits: IQAC conducts regular internal audits. 40 senior faculties are identified as IQAC auditors. During semester end, there will be an audit by internal auditors of all Teaching and non-teaching departments and administrative offices. Any deviation, departments are suggested for improvements.

External Audits: To strengthen the quality system, since 2013 Academic Audits by external agencies have also been initiated. Every year, external academic audit is conducted.

Pedagogy and Skill Upgradation Trainings:

IQAC initiates the Pedagogy training programmes for all the faculty. Since 2013 Pedagogy trainings are initiated by IQAC and all the faculty are trained in Outcome Based Education and assessment.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://naac.msrit.edu/IQAC/index.html

6.5.2 - The institution reviews its teaching-learning process, structures and methodologies of operation and learning outcomes at periodic intervals through its IQAC as per norms

Programme Assessment Committee Review: Programme assessment Committee (PAC) review is essential to understand the attainment levels of the students in terms of knowledge, skill and attitude component. The attainment of COs and POs are calculated based on the procedures defined by IQAC. The recommendations of PAC are considered for the curriculum revision and to improve teaching learning methodologies. The attainments of all COs and POs of UG and PG programmes are audited by IQAC.

Industry Participation: Enhancement of industry interaction in teaching-learning is essential to improve the outcomes of the students and to enhance the knowledge and skill of the faculty.

Internships: As per the IQAC procedures, an industry internship for the students (both UG & PG) for a period of 3 to 4 weeks has been made mandatory.

Curriculum design: As per IQAC procedures, Curriculum is designed

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by taking feedback from the industry. The academic Council, Board of Studies and Department Advisory Boards have the participation of experts from the industry, and have helped in revising the curriculum to industrial requirements.

Teaching and Learning by Industry Experts: IQAC encourages the departments to involve industry personnel in the partial delivery of the courses, Faculty Development Programmes, Workshops, Seminars and Technical Talks.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://naac.msrit.edu/IQAC/index.html

6.5.3 - Quality assurance initiatives of the institution include Regular meeting of the IQAC Feedback collected, analysed and used for improvement of the institution Collaborative quality initiatives with other institution(s) Participation in NIRF Any other quality audit recognized by state, national or international agencies (such as ISO Certification)

A. Any 4 or all of the above

File Description	Documents
Paste the web link of annual reports of the Institution	https://s3.ap-south-1.amazonaws.com/www.ms rit-iqac.com/assets/AQAR+DOCS/IQAC+-+Acade mic+and+Administrative+Audit-+Review+Repor t+-+Internal+and+External.pdf
Upload e-copies of accreditations and certification	<u>View File</u>
Upload details of quality assurance initiatives of the institution	<u>View File</u>
Upload any additional information	<u>View File</u>

#### 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 year

To promote Gender Equity and spread awareness of social responsibilities, Ramaiah Institute of Technology has conducted various events over the period (till date). Our activities include organizing events to promote the participation of women in the broader engineering scope, as well as placing an emphasis on outreach to empower local communities. Internally, we have several hallmark events that focus on Gender Equity and promote equal participation. Our annual IEEE Women in Engineering Fest is a multiple-day fest that emphasizes the continued pursuit of engineering disciplines by women, held every March by our students, the event consists of several technical and nontechnical activities, some exclusively for women, which promote interest in engineering and inclusiveness. All students collaborate to make these events a success, regardless of gender, and women are actively encouraged to participate. Ramaiah's proud sporting pedigree stems from events like the State Level Inter Colleges Basketball Tournament (2022) Chess, Badminton, etc., where both men and women can compete with the best teams from the state. Continuing with our work till today, Ramaiah Institute of Technology looks forward to actively promoting Gender Equity and awareness of social responsibility for the progress of society in the future.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	https://s3.ap-south-1.amazonaws.com/www.ms rit-iqac.com/assets/img/7.1.1-Sports+Achie vements+Photos+with+details+2021-22.pdf

# 7.1.2 - The Institution has facilities for alternate sources of energy and energy conservation: Solar energy Biogas plant Wheeling to the Grid Sensor-based energy conservation Use of LED bulbs/power-efficient equipment

A. Any 4 or All of the above

File Description	Documents
Geotagged Photographs	<u>View File</u>
Any other relevant information	<u>View File</u>

7.1.3 - Describe the facilities in the institution for the management of the following types of degradable and non-degradable waste (within a maximum of 200 words)

Solid Waste Management: MSRIT established a good solid waste management procedure. Separate bins are provided in all the floors and all the blocks to collect segregated dry waste, wet waste and e-waste. Dry waste and e-waste generated in the institution and majority of the wet waste is generated in the hostels and canteens. Collected dry waste is collected and segregated into recyclable plastic and paper waste and the same is sent for recycle. Construction and Demolition waste are being utilized as recycled aggregate in Civil Engineering. Department for substitution of natural aggregates in concrete.

Liquid Waste Management: The liquid waste coming from various laboratories, toilets and other sources are treated in effluent treatment plant and the treated water is used for flushing the toilets and gardening purposes.

E-Waste Management: The e-waste generated is collected and dumped in a safe place. The proper care is taken as per the directions of the pollution control board. The collected e-waste is supplied to Premier Comprint, an e-waste management company.

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

7.1.4 - Water conservation facilities available A. Any 4 or all of the above in the Institution: Rain water harvesting
Bore well /Open well recharge Construction of tanks and bunds Waste water recycling
Maintenance of water bodies and distribution system in the campus

File Description	Documents
Geotagged photographs / videos of the facilities	<u>View File</u>
Any other relevant information	<u>View File</u>

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#### 7.1.5 - Green campus initiatives include

# 7.1.5.1 - The institutional initiatives for greening the campus are as follows:

- A. Any 4 or All of the above
- 1. Restricted entry of automobiles
- 2. Use of bicycles/ Battery-powered vehicles
- 3. Pedestrian-friendly pathways
- 4. Ban on use of plastic
- 5. Landscaping

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

#### 7.1.6 - Quality audits on environment and energy undertaken by the institution

7.1.6.1 - The institution's initiatives to preserve and improve the environment and harness energy are confirmed through the following:

C. Any 2 of the above

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

A. Any 4 or all of the above

File Description	Documents
Reports on environment and energy audits submitted by the auditing agency	<u>View File</u>
Certification by the auditing agency	<u>View File</u>
Certificates of the awards received	<u>View File</u>
Any other relevant information	<u>View File</u>

7.1.7 - The Institution has a disabled-friendly and barrier-free environment: Ramps/lifts for easy access to classrooms and centres Disabled-friendly washrooms Signage including tactile path lights, display boards and signposts Assistive technology and facilities for persons with disabilities: accessible website, screen-reading software, mechanized equipment, etc. Provision for enquiry and information: Human assistance, reader, scribe, soft copies of reading materials, screen reading, etc.

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

7.1.8 - Describe the Institutional efforts/initiatives in providing an inclusive environment i.e. tolerance and harmony towards cultural, regional, linguistic, communal, socio-economic and other diversities (within a maximum of 200 words).

The institution has been taking several efforts and initiatives in providing an inclusive environment i.e., tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and other diversities. By celebrating many National and International Days, Events and Festivals the institution aims at bringing tolerance and harmony among the students and staff and other

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#### stakeholders.

Sl.No Activity Activity Date Number of participants 1 Independence Day 15-08-2021 130 2 Engineers Day 15-09-2021 150 3 Republic Day 26-01-2022 250 4 Womens Day 08-03-2022 250 5 Karnataka Formation Day 07-11-2021 180 6 Teachers Day 05-09-2021 380

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

7.1.9 - Sensitization of students and employees of the institution to constitutional obligations: values, rights, duties and responsibilities of citizens:

M S Ramaiah Institute of Technology sensitizes the students and the employees of the institution to the constitutional obligations about values, rights, duties, and responsibilities of citizens which enables them to conduct themselves as responsible citizens. To equip students with the knowledge, skill, and values that are necessary for sustaining one's balance between a livelihood and life by providing an effective, supportive, safe, accessible, and affordable learning environment. The students are inspired by participating in various programs on culture, traditions, values, duties, and responsibilities by inviting prominent people. The institute conducted awareness programs on the ban on plastics, cleanliness, Swachh Bharat, etc. involving students. The college establishes policies that reflect core values. Major Initiatives during this academic year are:

- Vigilance Awareness Week: 'Integrity A way of Life 'To spread awareness regarding sanitation, living standards of life, and knowing one's personality.
- A separate NSS unit is exclusively present to encourage the students and the unit is successfully conducting activities to serve the society.
- Blood donation camps, Guest lectures and workshops are arranged by eminent personalities to deliver lectures on ethics, values, duties, and responsibilities and on saving the environment.

File Description	Documents
Details of activities that inculcate values necessary to transform students into responsible citizens	<u>View File</u>
Any other relevant information	<u>View File</u>

7.1.10 - The institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic sensitization programmes in this regard: The Code of Conduct is displayed on the website There is a committee to monitor adherence to the Code of Conduct Institution organizes professional ethics programmes for students, teachers, administrators and other staff Annual awareness programmes on the Code of Conduct are organized

A. All of the above

File Description	Documents
Code of Ethics - policy document	<u>View File</u>
Details of the monitoring committee composition and minutes of the committee meeting, number of programmes organized, reports on the various programmes, etc. in support of the claims	<u>View File</u>
Any other relevant information	<u>View File</u>

### 7.1.11 - Institution celebrates / organizes national and international commemorative days, events and festivals

National Festivals are celebrated with enthusiasm. Every year the institute organizes national festivals and birth/death anniversaries of great Indian personalities. These National festivals are celebrated to make the students aware of their contribution to the nation. The activities like Teachers Day, Engineers Day, Republic Day, Independence Day and birthdays of great Indian personalities are celebrated regularly.

The following is a list of the major events that are celebrated

- 1. Republic Day
- 2. Independence Day
- 3. Gandhi Jayanthi
- 4. International Yoga Day
- 5. Teachers Day
- 6. Engineers Day
- 7. Rashtriya Ekta Diwas
- 8. Ambedkar Jayanthi
- 9. Kanakadasa Jayanthi
- 10. Valmiki Jayanthi

File Description	Documents
Annual report of the celebrations and commemorative events for during the year	<u>View File</u>
Geotagged photographs of some of the events	<u>View File</u>
Any other relevant information	<u>View File</u>

#### 7.2 - Best Practices

- 7.2.1 Provide the weblink on the Institutional website regarding the Best practices as per the prescribed format of NAAC
- 1. Title of the Practice
- a. Implement outcome-based education in Undergraduate and Postgraduate programs.
- b. Research promotional policy to improve RnD Activities, Ranking and Accreditation.
- 2. Objectives of the Practice
- a. Effective Implementation of outcome-based education for

improving graduate attributes and getting accreditation from the National Board of Accreditation. The change of accreditation from the output put model to the Outcome model was a major challenge.

b. Enhancing the research publications in peer-reviewed journals and conferences to improve the Research and Consultancy component in the NIRF Ranking has imposed a great challenge to improve the research culture in the Institution.

#### 3. The Context

- a. M S Ramaiah Institute Technology is an esteemed institution with highly experienced faculty. Changing the mindset of the faculty from an output model system to an outcome model was a major challenge.
- b. M S Ramaiah Institute Technology is well established teaching institution. Changing the orientation of faculty from teaching, enhancing the research culture and encouraging the faculty to improve the qualification from PG to Ph.D. was a major challenge.

#### 4. The Practice

a. With reference to the implementation of outcome-based education the main constraint was to train the faculty to understand the concept of Vision, Mission, Program educational objectives, Program Outcomes, Course Outcomes and mapping of the same. Modifying the curriculum by involving the stakeholders and collecting feedback from stakeholders and summarising the same with reference to curriculum changes. Involving the Industry in curriculum design and delivery was a major challenge.

File Description	Documents
Best practices in the Institutional website	https://s3.amazonaws.com/naac.msrit.edu/ne w_downloads/Best+Practices.pdf
Any other relevant information	https://msrit-bucket.s3-us-west-2.amazonaws.com/Uploads/ResearchPolicy.pdf

#### 7.3 - Institutional Distinctiveness

7.3.1 - Highlight the performance of the institution in an area distinct to its priority and thrust (within a maximum of 200 words)

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M S Ramaiah Institute of Technology has provided tremendous thrust and priority to its Program of Diversity Inclusion and Integration - an area distinctive to the Vision of the College. The Vision of the institute is to be an Institution of International Eminence, renowned for imparting quality technical education, cutting edge research and innovation to meet global socio-economic needs. The institute emphasizes on outcome based education and project based learning for imparting quality technical education and offer skill based training programs to enhance the skill set of the students. The institute has established many research centres in collaboration with the leading institutions across the globe to promote cutting edge research and to promote international collaborations with industrial academia. The institute always encourages to carry out research and innovation to cater the needs of the society for the economic upliftment. M S Ramaiah Institute of Technology adopted all the best practices like use of renewable energy resources, waste water cycle, solid waste disposal. Major thrust or importance is given to carry out societal activities such blood donation camp, computer training to the government school students. Distribution of study materials to the students, creating awareness on hygiene, drinking water and safety for the local community.

#### Part B

#### **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 are reflected in Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) of the various Programmes offered by the Institution.

The Institute has the systematic procedure for development, revision and implementation of curriculum of all the departments. The curriculum is designed carefully by addressing the recent technologies and the opportunities existing in regional and global level with all necessary fundamentals.

Factors for Curriculum Design: The Curriculum is designed to ensure that the students have the required domain knowledge, skills and attitude. The factors considered for design of curriculum are: (i) Syllabus of various reputed Indian and International Universities (ii) Model curriculum prescribed by AICTE, (iii) The Program Specific Outcomes of professional bodies, (iv) Suggestions by industry experts and alumni, (v) Syllabi of various competitive exams like GATE, IES, etc.

Implementation of Outcome Based Education (OBE) in the Curriculum: The initial phase for ensuring academic quality is the design of the curriculum. The next phase, the Course Outcomes (COs) for every course is mapped with the Program Outcomes (POs) of NBA and the Program Specific Outcomes (PSOs) of the program. An effective implementation of this Outcomes Based Education (OBE) ensures that our graduating engineers have all the 12 POs defined by NBA, and hence can compete on a global platform, and have expected global attributes.

File Description	Documents
Upload additional information, if any	<u>View File</u>
Link for additional information	http://www.msrit- igac.com/Syllabus_21-22.html

#### 1.1.2 - Number of Programmes where syllabus revision was carried out during the year

32

File Description	Documents
Minutes of relevant Academic Council/BOS meeting	<u>View File</u>
Details of syllabus revision during the year	<u>View File</u>
Any additional information	<u>View File</u>

# ${\bf 1.1.3 - Number\ of\ courses\ focusing\ on\ employability/entrepreneurship/\ skill\ development\ offered\ by\ the\ Institution\ during\ the\ year}$

193

File Description	Documents
Curriculum / Syllabus of such courses	<u>View File</u>
Minutes of the Boards of Studies/ Academic Council meetings with approval for these courses	<u>View File</u>
MoUs with relevant organizations for these courses, if any	<u>View File</u>
Any additional information	<u>View File</u>

#### 1.2 - Academic Flexibility

#### 1.2.1 - Number of new courses introduced across all programmes offered during the year

193

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	<u>View File</u>
Any additional information	<u>View File</u>
Institutional data in prescribed format (Data Template)	<u>View File</u>

# 1.2.2 - Number of Programmes offered through Choice Based Credit System (CBCS)/Elective Course System

32

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	<u>View File</u>
Any additional information	<u>View File</u>
List of Add on /Certificate programs (Data Template)	<u>View File</u>

#### 1.3 - Curriculum Enrichment

1.3.1 - Institution integrates cross-cutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability, and Human Values into the curriculum

Ethics into the Curriculum: To address the cross cutting issues which are relevant to Environment and Sustainability, Human Values and Professional Ethics, the institution included courses in the curriculum. Courses such as Environmental studies, Kannada manasu, Kannada kali, Constitution of India, Professional communication, Air pollution& control, Human anatomy, Human physiology, Industrial & environmental biotechnology, solid waste management, Professional Ethics and Environmental Studies have been included in the UG programmes.

a) Human Values: To inculcate moral, social and ethical values. To address the human values, following courses are offered by the Institution like: Human Physiology(HSAEC310/HSAEC410), Food Biotechnology(HSAEC310/HSAEC410), Human Resource Management & Yoga.

- b) Professional Ethics Courses such as Scientific Writing and Communication (BTAEC310/BTAEC410) and Indian Education Systems (MEAEC311/MEAEC411) are offered for first year UG courses of all branches of Engineering. To address Professional Ethics, the following courses are offered by the Institution: Scientific Writing and Communication (BTAEC310/BTAEC410) and Indian Education Systems (MEAEC311/MEAEC411).
- c) Environment and Sustainability: Course on Environmental Studies have been offered for all UG programmes. To create awareness among the students a number of courses are introduced like Environmental Life Cycle Assessment (CHAEC310/CHAEC410), Engineering Geology (CVAEC310/CVAEC410), Electrical Safety (EEAEC310/EEAEC410), Agriculture Technology (ETAEC310/ETAEC410), Green IT and Sustainability(ISAEC310/ISAEC410).

Solid Waste Management (CVPE 652), Air Pollution and Control (CVE 744).

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File Description	Documents
Upload the list and description of the courses which address issues related to Gender, Environment and Sustainability, Human Values and Professional Ethics in the curriculum	<u>View File</u>
Any additional information	<u>View File</u>

# 1.3.2 - Number of value-added courses for imparting transferable and life skills offered during the year

15

File Description	Documents
List of value-added courses	<u>View File</u>
Brochure or any other document relating to value-added courses	<u>View File</u>
Any additional information	<u>View File</u>

#### 1.3.3 - Number of students enrolled in the courses under 1.3.2 above

1271

File Description	Documents
List of students enrolled	<u>View File</u>
Any additional information	<u>View File</u>

#### 1.3.4 - Number of students undertaking field work/projects/ internships / student projects

1350

File Description	Documents
List of programmes and number of students undertaking field projects / internships / student projects	<u>View File</u>
Any additional information	<u>View File</u>

#### 1.4 - Feedback System

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### 1.4.1 - Structured feedback and review of the syllabus (semester-wise / year-wise) is obtained from 1) Students 2) Teachers 3) Employers and 4) Alumni

### A. All 4 of the above

File Description	Documents
Provide the URL for stakeholders' feedback report	https://msrit.edu/curriculum-feedback- analysis.html
Upload the Action Taken Report of the feedback as recorded by the Governing Council / Syndicate / Board of Management	View File
Any additional information	<u>View File</u>

# **1.4.2** - The feedback system of the Institution comprises the following

A. Feedback collected, analysed and action taken made available on the website

File Description	Documents
Provide URL for stakeholders' feedback report	https://msrit.edu/curriculum-feedback- analysis.html
Any additional information	<u>View File</u>

### TEACHING-LEARNING AND EVALUATION

### 2.1 - Student Enrollment and Profile

### 2.1.1 - Enrolment of Students

### 2.1.1.1 - Number of students admitted (year-wise) during the year

5860

File Description	Documents
Any additional information	<u>View File</u>
Institutional data in prescribed format	<u>View File</u>

2.1.2 - Number of seats filled against reserved categories (SC, ST, OBC, Divyangjan, etc.) as per the reservation policy during the year (exclusive of supernumerary seats)

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### 1334

File Description	Documents
Any additional information	<u>View File</u>
Number of seats filled against seats reserved (Data Template)	<u>View File</u>

### 2.2 - Catering to Student Diversity

2.2.1 - The institution assesses students' learning levels and organises special programmes for both slow and advanced learners.

M S Ramaiah Institute of Technology has students from other states in India and countries with different backgrounds. The institution assesses the learning levels of the student right from the time of admission to the institute through a structured orientation programme. Some of these activities are:

Bridge Courses: Every year, before the commencement of the regular classes, identified students mainly foreign nationals are trained in mathematics, physics and English language courses. The lateral entry (Diploma) students' must take a bridge courses in mathematics and social sciences. Slow Learners: Slow learners are also identified during the course of the semester based on their performance in the Internal Assessment tests. Mentoring: each student is assigned a "Proctor" who is his academic advisor for the duration of his studies. When the marks are below the expected levels the Proctor counsels their students to improve performance. Remedial Classes: When test marks are below the eligibility level in a course, the department schedules remedial classes to help the student understand the subject better.

Advanced Learners: Advanced Learners are identified during the semester for different courses based on their academic performance.

Certificate courses are conducted in topics of the domain for fast learners, allowing for industryscale application level knowledge to be imparted to the students.

Vocational courses are run by the department of Computer Science and Engineering for all students like Web Development, Android App Development, Java Programming, Data Analytics etc.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://s3.ap-south-1.amazonaws.com/www.m srit-iqac.com/assets/AQAR+DOCS/2.2.1-NRI+ Admission+details+2021.pdf

### 2.2.2 - Student - Teacher (full-time) ratio

Year	Number of Students	Number of Teachers
01/12/2022	5860	384

File Description	Documents
Upload any additional information	<u>View File</u>

### 2.3 - Teaching- Learning Process

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

Various departments in the institute have adopted techniques to improve overall student learning levels, such that it is suitable for their curricula. Some specific cases are listed below.

Experiential learning: Project Based Learning, Mini-Projects, Modern Tool Usage

Project - based learning:

Students are encouraged to carry out a real time project in collaboration with industry or research institutions. All the projects are exhibited under one roof as "PRADARSHANA" every year which are evaluated by experts from industry and institute. This provides a good exposure for the students to interact with industry personnel and encourage for a start-up culture.

A sample list of items and samples of the details of the students centric methods adopted is available in the document attached. Mini-Projects: Many programmes across the institution involve students in a Mini-Project as part of the continuous internal evaluation (CIE) component of the course. This provides a practical introduction to the theoretical concepts at an application level.

Modern Tools: Most of the programmes uses software simulations to supplement the theory courses and the students are encouraged to use open source softwares. Along with the open source softwares institution has many simulation software's such as, MATLAB, SIMULINK, MULTISIM, SPENHYSYS, ANSYS, COMSOL, PSCAD etc.

Participative learning: MOOCs, Case Studies

MOOCs: Students are encouraged to take MOOCs courses to supplement the regular teaching. The weightage for the same is given in Continuous Internal Evaluation. Students are regularly taking courses from NPTEL, SWAYAM etc

File Description	Documents
Upload any additional information	<u>View File</u>
Link for additional Information	https://archive.nptel.ac.in/LocalChapter/statistics/313/; https://www.msrit.edu/department/int-411.html

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

It is essential for students to learn and master the latest technologies in order to be corporate-ready. As a result, teachers along with the traditional mode of instruction are combining technology to engage students in long-term learning. Some of the tools MSRIT uses are:

### ICT Tools:

- Projectors projectors are available in various classrooms / labs.
- 2. Desktop and Laptops- Arranged in Computer Lab and Faculty cabins all over the campus.

- 3. Printers, Scanners & Photocopier machines Installed at Labs, HOD Cabins and all prominent places.
- 4. Seminar Rooms- Three seminar halls are equipped with all digital facilities.
- 5. Digital Display Boards and Smart Boards are installed all over the campus.
- 6. Online Classes are conducted through Zoom, Google Meet, Microsoft Team and Google Classroom).
- 7. MOOCS Platform (NPTEL, Coursera, Udemy, etc.).
- 8. Digital Library resources.

### Use of ICT by Faculty

- PowerPoint presentations- Faculties are encouraged to use power-point presentations in their teaching by using LCDs and projectors. They are also equipped with a digital library, online search engines and websites to prepare effective presentations.
- Industry Connect- Seminars and Conference rooms are digitally equipped where guest lectures, expert talks and various competitions are regularly organized for students.
- Online quiz-Faculties prepare an online quiz for students after the completion of each unit with the help of GOOGLE FORMS.
- Video Lecture Capture- Recording of video lectures is made available to students through Impartus for long-term learning and future referencing.

File Description	Documents
Provide link for webpage describing ICT enabled tools including online resources for effective teaching and learning process	https://s3.ap-south-1.amazonaws.com/www.m srit-iqac.com/assets/AQAR+DOCS/MSRIT- Short-URL's.pdf
Upload any additional information	<u>View File</u>

### 2.3.3 - Ratio of students to mentor for academic and other related issues

### 2.3.3.1 - Number of mentors

308

File Description	Documents
Upload year-wise number of students enrolled and full-time teachers on roll	<u>View File</u>
Circulars with regard to assigning mentors to mentees	<u>View File</u>

### 2.3.4 - Preparation and adherence to Academic Calendar and Teaching Plans by the institution

Preparation and Adherence of Academic Calendar:

The institution prepares the academic calendar every year in advance. The coverage of academic calendar covers the list of examination dates, seminars, conferences, guest lectures, workshops and industrial visits holidays, vacation dates, festivals, etc. The academic calendar provides the total effective working days available in a given semester. Then the director and senior colleagues prepare the timetable by correlating the working days available and coverage of the curriculum of the subjects. Thus the academic calendar monitors the effective delivery of the program with academic and business inputs.

Preparation and Adherence of Teaching Plan:

The concerned faculties prepare teaching plans for their respective subjects for 30 hours. These 30 hours are distributed among classroom teaching, case studies, role play, workshops and lab sessions as per the subject requirements. These plans are made in advance and serve as guides for conducting sessions. The Principal and HODs check the progress of each course and ensure the timely and effective completion of a course in the specified time frame with a perfect blend of practical and theoretical inputs.

File Description	Documents
Upload the Academic Calendar and Teaching Plans during the year	<u>View File</u>

### 2.4 - Teacher Profile and Quality

### 2.4.1 - Number of full-time teachers against sanctioned posts during the year

384

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File Description	Documents
Year-wise full-time teachers and sanctioned posts for the year	<u>View File</u>
List of the faculty members authenticated by the Head of HEI	No File Uploaded
Any additional information	<u>View File</u>

# 2.4.2 - Number of full-time teachers with PhD/ D.M. / M.Ch. / D.N.B Super-Specialty / DSc / DLitt during the year

58

File Description	Documents
List of number of full-time teachers with PhD./ D.M. / M.Ch. / D.N.B Super- Specialty / D.Sc. / D.Litt. and number of full-time teachers for 5 years	<u>View File</u>
Any additional information	<u>View File</u>

# 2.4.3 - Total teaching experience of full-time teachers in the same institution: (Full-time teachers' total teaching experience in the current institution)

14

File Description	Documents
List of teachers including their PAN, designation, Department and details of their experience	<u>View File</u>
Any additional information	<u>View File</u>

### 2.5 - Evaluation Process and Reforms

# 2.5.1 - Number of days from the date of last semester-end/ year- end examination till the declaration of results during the year

12

File Description	Documents
List of Programmes and date of last semester-eend examinations and of declaration of result	l / year-
Any additional inform	ion <u>View File</u>

# 2.5.2 - Number of students' complaints/grievances against evaluation against the total number who appeared in the examinations during the year

### 17

File Description	Documents
Upload the number of complaints and total number of students who appeared for exams during the year	<u>View File</u>
Upload any additional information	<u>View File</u>

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

Examination system is completely IT integrated (E-sutra software) which enables the system for the fast processing of registration, conduction of examination, evaluation, attainment of outcomes, announcement of results and printing of grade cards.

Examination Procedures for Continuous Internal Evaluation(CIE) is as below:

- 1. CIE is conducted as per the academic calendar for 50 marks.
- 2. Students wise progress report is generated after every test and the same is communicated.

Under graduate (Semester End Examination) -

- 1. The student registers for the examination online.
- 2. The eligible students list and their admission tickets are printed by the automation system.

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- 3. The results are generated after completion of valuation process.
- 4. Moodle: Used to conduct quizzes for the purpose of Continuous Internal Assessment (CIA)

Post Graduate -

- 1. The steps for the pre-examination process are as per the undergraduate examination.
- 2. The bar coded answer books are subjected to double evaluation & marks entered by the evaluators are printed and marks sheet are submitted along with the packets.
- 3. The system decides the answer books to be subjected to third evaluation based on the Institution norms.

Reforms impact on Examination process:

- 1. Increased confidentiality, reduction of manual entry & minimization of mistakes in the evaluation process.
- 2. Course attainments and other OBE analysis is carried out precisely and reports are generated.
- 3. Results are announced on institutional website.
- 4. A digital repository with backup is maintained which enables quick document retrieval for the purpose of certifications & printing certificates.
- 5. Enhancement of credibility of examination process.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	https://msrit.edu/examination.html#exam- section

### 2.6 - Student Performance and Learning Outcomes

2.6.1 - Programme Outcomes and Course Outcomes for all Programmes offered by the institution are stated and displayed on the website and communicated to teachers and students

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Programme Outcomes (POs) are the statements which describe the qualities/competencies of a graduateacquired throughout the programme. POs are derived from the graduate attributes, which vary from UG toPG programmes. All the POs are defined based on the knowledge, skill and attitude components. Thestatements of POs are defined by the National Board of Accreditation for Engineering, MBA and MCAprogrammes. Programme Specific Outcomes (PSOs) for UG programme explain the competency of theprogramme which are derived from the core curriculum. The maximum number of PSOs are limited to 3 to 4.

Course outcomes (COs) describe the competencies which will be gained by the student through the course. The course outcomes are defined for all theory subjects, laboratory and projects. Number of COs can varyfrom 3 to 6 depending the course content. COs are defined based on the Bloom's Taxonomy by the coursecoordinator. The COs are mapped to appropriate programme outcomes with a proper weightage from 1 to 3. Project work is mapped to majority of the programme outcomes.

POs, PSOs and COs are displayed in the following:

• College website: http://www.msrit.edu

The syllabus of all programs offered by the department is uploaded on the College website.

File Description	Documents
Upload COs for all courses (exemplars from the Glossary)	<u>View File</u>
Upload any additional information	No File Uploaded
Link for additional Information	http://www.msrit- igac.com/Syllabus_21-22.html

### 2.6.2 - Attainment of Programme Outcomes and Course Outcomes as evaluated by the institution

The Departments have designed the curriculum taking into consideration all the POs and PSOs. The curriculum strongly maps to all the POs and PSOs. The course outcomes (COs) are mapped with POs and PSOs with weightage (3 - high, 2-moderate and 1-Low) for the conformity. The COs are designed considering the Bloom's Taxonomy. The POs and PSOs represent the competency

gained through the programme. The mapping of COs to POs andPSOs represents the contribution of courses towards the attainment of POs and PSOs of the programme. The COs are measured using direct and indirect assessment techniques. Direct Assessment includes Continuous Internal Evaluation, Semester End Examination, project etc. The Indirect assessment is carried out through course end surveys.

The CIE consisting of internal assessment questions, quizzes, assignments and laboratory courses aremapped to COs. The COs in turn are mapped to the POs. A process similar to CIE mapping is followedfor SEE. Rubrics are developed for the project, seminar, case study and internships. The course endsurvey questions are framed by the course coordinator to find the attainment level of course. Theweightage of components for CO attainment is 40% for CIE, 40% for SEE and 20% for indirect assessment.

A sample of attainment of Programme Outcomes and Course Outcomes as evaluated by the institution is attached for your kind reference.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	http://www.msrit.edu

### 2.6.3 - Pass Percentage of students

# 2.6.3.1 - Total number of final year students who passed in the examinations conducted by Institution

-	1		
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-	_	u	_

File Description	Documents
Upload list of Programmes and number of students appear for and passed in the final year examinations	<u>View File</u>
Upload any additional information	<u>View File</u>
Paste link for the annual report	https://assessmentonline.naac.gov.in/public/index.php/admin/get_file?file_path=eyJpdiI6IldqcDd0NnNZaVA3NU02THZkMi9KUFE9PSIsInZhbHVlIjoiRzMxKzFURFZQRVErRWhwK1V1RTZiRmozVGFIdUhSZUY5UWVTSGZjbDl4TUJ0NmoydE5QdXprZ1BKeW9MOSthUyIsIm1hYyI6ImFiMDJjYTcyNGViZTVjYjI3YjNhZWE4NDdlMjgwMWViYTk1YjdlYTg3NTY5ZTA1MTlhMTJhMTUzMTIwODMyNGYiLCJ0YWciOiIifQ==

### 2.7 - Student Satisfaction Survey

# 2.7.1 - Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design its own questionnaire). Results and details need to be provided as a weblink

https://msrit-bucket.s3.us-west-2.amazonaws.com/Uploads/Student
+Satisfaction+Survey+report+-2022+(21-09-2022).pdf

### 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

MSRIT strongly promotes research activities among faculty and students. It is focused on the following Six themes.

Industry oriented R&D

To ensure that faculty research is linked to leading industries, 8 Centre of Excellences have already been established at MSRIT. The main objective is to bring faculty from diverse backgrounds in order to foster interdisciplinary research and improve external funding/consultancy.

Seed Funding

Since October 2019 MSRIT provides seed funding of more than Rs 5 lakhs to enable faculty to experiment with innovative ideas & to develop novel prototypes and algorithms.

Financial assistance to full-time PhD scholars

MSRIT also provides support to full-time PhD scholars up to Rs 25,000 per month.

Incentives for quality publications

Since May 2017 MSRIT has started providing incentives to faculty who have published in quality journals derived directly from Scimago (Q1 to Q4).

Intellectual Property Policy

The Intellectual Property Policy set by MSRIT sets a framework for the protection of all IPR generated at MSRIT.

Establishment of a R&D group

Finally, MSRIT has established a Research Centre, with two coordinators (Dr. N Sriram and Dr. KRV Subramanian) and with 14 full time faculty identified from all engineering disciplines to focus on research & to promote research.

File Description	Documents
Upload the Minutes of the Governing Council/ Syndicate/Board of Management related to research promotion policy adoption	<u>View File</u>
Provide URL of policy document on promotion of research uploaded on the website	https://msrit-bucket.s3-us-west-2.amazona ws.com/Uploads/ResearchPolicy.pdf
Any additional information	<u>View File</u>

### 3.1.2 - The institution provides seed money to its teachers for research

### 3.1.2.1 - Seed money provided by the institution to its teachers for research during the year (INR in lakhs)

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### 18.7

File Description	Documents
Minutes of the relevant bodies of the institution regarding seed money	<u>View File</u>
Budget and expenditure statements signed by the Finance Officer indicating seed money provided and utilized	<u>View File</u>
List of teachers receiving grant and details of grant received	<u>View File</u>
Any additional information	<u>View File</u>

# 3.1.3 - Number of teachers who were awarded national / international fellowship(s) for advanced studies/research during the year

00

File Description	Documents
e-copies of the award letters of the teachers	<u>View File</u>
List of teachers and details of their international fellowship(s)	<u>View File</u>
Any additional information	<u>View File</u>

### 3.2 - Resource Mobilization for Research

# 3.2.1 - Grants received from Government and Non-Governmental agencies for research projects, endowments, Chairs during the year (INR in Lakhs)

209.10139

File Description	Documents
e-copies of the grant award letters for research projects sponsored by non- governmental agencies/organizations	<u>View File</u>
List of projects and grant details	<u>View File</u>
Any additional information	<u>View File</u>

### 3.2.2 - Number of teachers having research projects during the year

26

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	https://s3.ap-south-1.amazonaws.com/www.m srit-iqac.com/assets/AQAR+DOCS/3.2.2.pdf
List of research projects during the year	<u>View File</u>

### 3.2.3 - Number of teachers recognised as research guides

58

File Description	Documents
Upload copies of the letter of the university recognizing teachers as research guides	<u>View File</u>
Institutional data in Prescribed format	<u>View File</u>

# ${\bf 3.2.4 \cdot Number\ of\ departments\ having\ research\ projects\ funded\ by\ Government\ and\ Non-Government\ agencies\ during\ the\ year}$

14

File Description	Documents
Supporting document from Funding Agencies	<u>View File</u>
Paste link to funding agencies' website	https://dst.gov.in/
Any additional information	<u>View File</u>

### 3.3 - Innovation Ecosystem

3.3.1 - Institution has created an ecosystem for innovations and creation and transfer of knowledge supported by dedicated centres for research, entrepreneurship, community orientation, incubation, etc.

The Entrepreneurship Development Cell (EDC) at MSRIT was established in July 2003. EDC-MSRIT Bangalore is a Platform for MSRIT students dedicated to the development of multidimensional skills. It invites various eminent entrepreneurs to deliver lectures to educate the students about entrepreneurship. Guest Lectures, Workshops, etc., are conducted throughout the year to involve students in activities that are essential to be an entrepreneur. E-Cell also actively incubates start-up ideas by creating the required ecosystem to be an entrepreneur. E-Cell functions to guide the budding Entrepreneurs in their endeavour. Many ideas are incubated at EDC leading up to start-Ups.

The Vision and Mission of the EDC are

### **Vision**

To provide and sustain entrepreneurial activities to foster start-up culture and strive to implement environmental, social and economic solutions.

### MISSION

- -To generate new and innovative ideas.
- -To organize entrepreneurial Conclaves/ Ideathon / Hackathon / Competitions.
- -To convert innovative ideas into tangible products and solutions.
- -To encourage start-ups and their ecosystem.

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Highlights of EDC.

- · Currently, four prototypes are being incubated.
- EDC has collaborations with Confederation of Indian Industry(CII) and National Entrepreneurship Network(NEN), Wadhwani foundation.
- EDC has a budget allocation of Rs.17.0-18.0 Lakhs and has a built-up area of around 3000 sq. Ft.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://msrit-bucket.s3.us-west-2.amazona ws.com/Supporting/EDC/2021-22.pdf

# 3.3.2 - Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR), Entrepreneurship and Skill Development during the year

48

File Description	Documents
Report of the events	<u>View File</u>
List of workshops/seminars conducted during the year	<u>View File</u>
Any additional information	<u>View File</u>

### 3.4 - Research Publications and Awards

3.4.1 - The Institution ensures	A.	All	of	the	above
implementation of its Code of Ethics for					
Research uploaded in the website through					
the following: Research Advisory					
<b>Committee Ethics Committee Inclusion of</b>					
Research Ethics in the research					
methodology course work Plagiarism check					
through authenticated software					

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File Description	Documents
Code of Ethics for Rese Research Advisory Cor and Ethics Committee constitution and list of members of these comm software used for plagic check	ttees,
Any additional informa	on <u>View File</u>

# 3.4.2 - Number of PhD candidates registered per teacher (as per the data given with regard to recognized PhD guides/ supervisors provided in Metric No. 3.2.3) during the year

### 3.4.2.1 - Number of PhD students registered during the year

70

File Description	Documents
URL to the research page on HEI website	https://msrit.edu/research/phd/index.html #overview
List of PhD scholars and details like name of the guide, title of thesis, and year of registration	View File
Any additional information	No File Uploaded

# 3.4.3 - Number of research papers per teacher in CARE Journals notified on UGC website during the year

### 3.833

File Description	Documents
List of research papers by title, author, department, and year of publication	<u>View File</u>
Any additional information	No File Uploaded

# 3.4.4 - Number of books and chapters in edited volumes / books published per teacher during the year

0.28

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

# 3.4.5 - Bibliometrics of the publications during the year based on average Citation Index in Scopus/ Web of Science/PubMed

### 3.4.5.1 - Total number of Citations in Scopus during the year

3858

File Description	Documents
Any additional information	<u>View File</u>
Bibliometrics of the publications during the year	<u>View File</u>

# 3.4.6 - Bibliometrics of the publications during the year based on Scopus/ Web of Science – h-Index of the University

### 3.4.6.1 - h-index of Scopus during the year

71

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

### 3.5 - Consultancy

### 3.5.1 - Revenue generated from consultancy and corporate training during the year (INR in lakhs)

107.0197

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

# 3.5.2 - Total amount spent on developing facilities, training teachers and clerical/project staff for undertaking consultancy during the year

### 71.796575

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

### 3.6 - Extension Activities

3.6.1 - Extension activities carried out in the neighbourhood sensitising students to social issues for their holistic development, and the impact thereof during the year

### MSRIT National Service Scheme:

The National Service Scheme (NSS) Unit of MS Ramaiah Institute of Technology was first started in the year 1999 & has adopted Avathi village near Devanahalli under Unnat Bharat Abhiyaan and Swach Bharat Abhiyaan scheme. More than 15 projects are under taken by the students to provide sanitation and pure drinking water.

### Annual Blood Donation Camp

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- Camps have various activities such as recycling new books from used ones.
- E-waste collection drives are held, and a plantation drive are organized. NSS-student-volunteers visit slums and conduct dental and eye check-ups.
- Skill development programs for drop-out students.
- Visits to slum areas: Skill development programs are conducted for all age groups.

Please visit http://www.msrit.edu/support/nss.html

**IEEE Outreach Activities:** 

The IEEE MSRIT Student Branch was inaugurated in November 2003. The branch endeavors to enrich the students of MSRIT and other Engg colleges with the latest developments in various fields of technology and research. IEEE MSRIT has various chapters namely Women in Engineering Affinity Group, Robo-RIT, Power and Energy Society (PES) student chapter, Computer Intelligence Society student chapter, Engineering in Medicine and Biology Society student chapter and Signal processing student chapter.

For further details, please visit our web page https://site.ieee.org/sb-ritb/

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	http://www.msrit.edu/support/nss.html

# 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 the year

6

File Description	Documents
Number of awards for extension activities in during the year	<u>View File</u>
e-copy of the award letters	<u>View File</u>
Any additional information	<u>View File</u>

3.6.3 - Number of extension and outreach programmes conducted by the institution through NSS/NCC/Red Cross/YRC, etc. during the year (including Government-initiated programmes such as Swachh Bharat, AIDS Awareness, and Gender Sensitization and those organised in collaboration with industry, community and NGOs)

3

File Description	Documents
Reports of the events organized	<u>View File</u>
Any additional information	<u>View File</u>

# 3.6.4 - Number of students participating in extension activities listed in 3.6.3 during the year

955

File Description	Documents
Reports of the events	<u>View File</u>
Any additional information	<u>View File</u>

### 3.7 - Collaboration

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

462

File Description	Documents
Copies of documents highlighting collaboration	<u>View File</u>
Any additional information	<u>View File</u>

3.7.2 - Number of functional MoUs with institutions of national and/or international importance, other universities, industries, corporate houses, etc. during the year (only functional MoUs with ongoing activities to be considered)

23

File Description	Documents
e-copies of the MoUs with institution/ industry/ corporate house	<u>View File</u>
Details of functional MoUs with institutions of national, international importance, other institutions etc. during the year	<u>View File</u>
Any additional information	<u>View File</u>

### 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 equipments, etc.

The campus has a built area of 85042.32 sq.m. catering to the needs of all students and faculty. The Institution has a total 125 classrooms, 103 laboratories, central library, 1 auditorium, 5 seminar halls, 4 board rooms, and playground. The computing facilities (3605 Computers) is more than adequate for the teaching learning process. All the classrooms are equipped with Wi-fi and LCD. About 6 classrooms are equipped with recording facility and used extensively for recording lectures. The total Internet Bandwidth available is 1800mbps. Effective utilization of infrastructure is ensured through appointment of adequate and well qualified lab technicians/system administrator. The available physical infrastructure is optimally utilized beyond regular college hours to conduct certificate courses, co-curricular activities/extra curricular activities, proctor meetings, placement training classes, seminars, conferences, etc. Every department has dedicated and adequate number of laboratories and classrooms more than VTU and AICTE norms. Each laboratory is equipped with sufficient number of required experimental setups. The Central library is equipped with a good number of reference books and journals. Every department has computer laboratories housed in different blocks are utilized for on-line examinations, aptitude tests, project work and competitions by students of all departments.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://www.easytourz.com/BT- EmabedTour/all/87002a26d035a1f7

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

### Sports Facilities

The Department of Physical Education is headed by Physical Director and assisted by individual coaches for football, hockey, volleyball, cricket, basketball, etc. The Department aims to provide the students with wide range of sports recreation and leisure activities for students, staff and faculty. The college offers several facilities on campus to cater to the physical development of students with provision for both indoor and outdoor games. Carom, Chess and Table tennis facilities are housed within an indoor sports complex. The college has courts for Basketball and Tennis and a ground for football, hockey and many other sports.

### Cultural Activities

MSRIT strongly believes in the holistic development of students. This is made possible by encouraging them to engage in various cultural activities such as music, theatre, literary, visual and fine arts, etc. apart from Sports, NSS, Entrepreneurship Cell and other similar pursuits. It is the only Institution that has created an exclusive department, known as the Department of Extra-Curricular Activities (DECA), to oversee all such activities of students on campus and off-campus throughout the year. Every year M. S. Ramaiah Institute of Technology organizes UDBHAV, one of the best college cultural fests of South India.

File Description	Documents
Geotagged pictures	<u>View File</u>
Upload any additional information	<u>View File</u>
Paste link for additional information	https://www.msrit.edu/support/sports.html

### 4.1.3 - Number of classrooms and seminar halls with ICT-enabled facilities

### 131

File Description	Documents
Upload any additional information	<u>View File</u>
Upload Number of classrooms and seminar halls with ICT enabled facilities (Data Template)	<u>View File</u>

# 4.1.4 - Expenditure for infrastructure augmentation, excluding salary, during the year (INR in Lakhs)

### 2456.37

File Description	Documents
Upload audited utilization statements	<u>View File</u>
Details of Expenditure, excluding salary, during the years	<u>View File</u>
Any additional information	<u>View File</u>

### 4.2 - Library as a Learning Resource

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

- The MSRIT Library is spread across 6 Locations spread across the campus with a carpet area of 40350 Sq. Ft with a total seating capacity of libraries is 1,265.
- The collection comprises of 1,17,802 volumes of books with 38,512 titles along with 23,956 e-Books with perpetual access to 65 National and International Printed Journals predominantly related to Engineering, Technology, Management and allied subjects.

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- The Library subscribes to 7,886 full-text e-journals from ICE, IEL Online Taylor & Francis, Springer, etc.
- The Library resources have been completely Bar Coded and automated using LIBSYS 7 (Rel.3). Library provides a Technology Platform and Database of Plagiarism Checking Tool "Turnitin Web Tool to support the R & D activities of students and faculty.
- Digital Libraries that are set up are well facilitated with 132 high-end configured computer systems that are connected to high bandwidth network.
- Remote access to e-resources has been facilitated by the library through the services of KNIMBUS Digital Library Platform with Remote Access Solution.
- Name of the ILMS software: LIBSYS (INTEGRATED LIBRARY MANAGEMENT SOFTWARE)
- Name of the Digital Library Software: DSpace on UBUNTU OS
- Remote Access: Knimbus Federated Search Engine
- Standards: BSB, BIS Standards
- Database: SCOPUS
- Grammar Checker: NetAnalytiks-Sententia

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://www.msritlibrary.org/

# 4.2.2 - Institution has access to the following: e-journals e-ShodhSindhu Shodhganga Membership e-books Databases Remote access to e-resources

A. Any 4 or more of the above

File Description	Documents
Details of subscriptions like e- journals, e-books, e- ShodhSindhu, Shodhganga membership	<u>View File</u>
Upload any additional information	<u>View File</u>

# 4.2.3 - Expenditure on purchase of books/ e-books and subscription to journals/e-journals during the year (INR in lakhs)

89.68

File Description	Documents	
Audited statements of accounts	<u>View File</u>	
Any additional information	<u>View File</u>	
Details of annual expenditure for purchase of books/e-books and journals/e- journals during the year (Data Template)	<u>View File</u>	

### 4.2.4 - Usage of library by teachers and students (footfalls and login data for online access)

### 4.2.4.1 - Number of teachers and students using the library per day during the year

#### 1657

File Description	Documents
Upload details of library usage by teachers and students	<u>View File</u>
Any additional information	<u>View File</u>

### 4.3 - IT Infrastructure

4.3.1 - Institution has an IT policy covering Wi-Fi, cyber security, etc. and has allocated budget for updating its IT facilities

The Department of IT Services is a one stop hub for all things related to IT infrastructure of the Institution. It houses an air-conditioned server room with adequate power backup. Internet Gateway is also located here. The other servers housed here are:

1.Biometric Attendance Server 2. DHCP Server 3. Web (Juke) Server 4. Student Information System Server 5. Moodle/eLearning Server.6. Mathematica Server 7. Wi-Fi Management Console (Server) 8. NVR (Network Video Recorder).

It is responsible for overseeing of any installation/upgradation/maintenance of the computer

systems/networks/CCTV cameras/Wi-Fi access points within the institution. The department has qualified technical support staff for effective maintenance of the same.

The entire campus is fully Wi-Fi enabled with internet speed of

1000 Mbps. A separate leased line internet connection of 600 Mbps is utilized for the wired network within the campus. The traffic through these networks is filtered through the firewall (Sophos Xg), which prevents any malicious/unwanted content from entering the network.

Year 2021-2022:

Leased Line 600 MBPS

Wi-Fi 1200 MBPS

Total Bandwidth 1800 MBPS

Number of computers available: 3605

MSRIT also has a digital library infrastructure. The institute has subscribed to various e-journals, digital video lectures (NPTEL and others), which is renewed from time to time

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://msrit.edu/facilities/internet.htm

### 4.3.2 - Student - Computer ratio

Number of Students	Number of Computers
5860	3605

File Description	Documents
Upload any additional information	<u>View File</u>

# 4.3.3 - Bandwidth of internet connection in the Institution and the number of students on campus A. ?50 Mbps

File Description	Documents
Details of bandwidth available in the Institution	<u>View File</u>
Upload any additional information	<u>View File</u>

# 4.3.4 - Institution has facilities for e-content development: Facilities available for e-content development Media Centre Audio-Visual Centre Lecture Capturing System (LCS) Mixing equipments and software for editing

<b>A</b> .	Al	l f	our	of	the	above
------------	----	-----	-----	----	-----	-------

File Description	Documents			
Upload any additional information	View File			
Paste link for additional information	https://s3.ap-south-1.amazonaws.com/www.m srit-igac.com/assets/AQAR+DOCS/MSRIT- Short-URL's.pdf			
List of facilities for e-content development (Data Template)	<u>View File</u>			

### 4.4 - Maintenance of Campus Infrastructure

# 4.4.1 - Expenditure incurred on maintenance of physical and academic support facilities, excluding salary component, during the year (INR in lakhs)

### 2456.37

File Description	Documents
Audited statements of accounts	<u>View File</u>
Upload any additional information	<u>View File</u>

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

M S Ramaiah Institute of Technology Maintenance Department maintains the physical infrastructure of the institute.

Potable water supply

The water source for MSRIT is bore wells. The groundwater is tapped and is used for domestic purposes.

Rainwater Harvesting

M.S. Ramaiah Institute of Technology has 6 blocks & each block has a rainwater harvesting tank and the collected rainwater is used for gardening purposes.

Wastewater treatment

M. S. Ramaiah Institute of Technology has a wastewater treatment plant, with a capacity to treat 2.5 lakh litres of wastewater per day using SBR technology.

Parking arrangement in MSRIT

The Institution provides four-wheeler and two-wheeler parking facilities for the staff and students with a parking capacity is 70 Cars and 1800 2-wheelers.

Solid waste disposal

The solid waste generated inside the institution premises is segregated & wet waste is directly disposed to BBMP lorries while the dry waste consisting are disposed to scrap vendors for recycling.

e-waste disposal

The authorized vendor is allowed to collect the e-waste for treatment, recycling and disposal at the end of each semester.

Chemical Waste Treatment

The chemical wastewater from laboratories are being treated separately in an effluent treatment plant (ETP) & is mixed with domestic sewage.

Electric Power Backup:

Solar panels are installed at the MSRIT campus with a capacity of 431kWp. This caters to the 47% electric power needs of the Institute

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://msrit.edu/facilities/others.html

### STUDENT SUPPORT AND PROGRESSION

### 5.1 - Student Support

# **5.1.1** - Number of students benefitted by scholarships and freeships provided by the Government during the year

### 1264

File Description	Documents
Upload self-attested letters with the list of students receiving scholarships	<u>View File</u>
Upload any additional information	<u>View File</u>

# 5.1.2 - Number of students benefitted by scholarships and freeships provided by the institution and non-government agencies during the year

### 231

File Description	Documents
Upload any additional information	<u>View File</u>
Institutional data in prescribed format	<u>View File</u>

# 5.1.3 - The following Capacity Development and Skill Enhancement activities are organised for improving students' capabilities Soft Skills Language and Communication Skills Life Skills (Yoga, Physical fitness, Health and Hygiene) Awareness of Trends in Technology

### B. Any 3 of the above

File Description	Documents
Link to Institutional website	https://www.msrit.edu/
Details of capability development and schemes	<u>View File</u>
Any additional information	<u>View File</u>

# 5.1.4 - Number of students benefitted from guidance/coaching for competitive examinations and career counselling offered by the institution during the year

#### 1147

File Description	Documents
Any additional information	<u>View File</u>
Number of students benefited by guidance for competitive examinations and career counseling during the year (Data Template)	<u>View File</u>

# 5.1.5 - The institution adopts the following mechanism for redressal of students' grievances, including sexual harassment and ragging: Implementation of guidelines of statutory/regulatory bodies Creating awareness and implementation of policies with zero tolerance Mechanism for submission of online/offline students' grievances Timely redressal of grievances through appropriate committees

### A. All of the above

File Description	Documents
Minutes of the meetings of students' grievance redressal committee, prevention of sexual harassment committee and Anti-ragging committee	<u>View File</u>
Details of student grievances including sexual harassment and ragging cases	<u>View File</u>
Upload any additional information	No File Uploaded

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### 5.2 - Student Progression

### 5.2.1 - Number of outgoing students who got placement during the year

#### 1147

File Description	Documents
Self-attested list of students placed	<u>View File</u>
Upload any additional information	<u>View File</u>

### 5.2.2 - Number of outgoing students progressing to higher education

#### 151

File Description	Documents
Upload supporting data for students/alumni	<u>View File</u>
Details of students who went for higher education	<u>View File</u>
Any additional information	<u>View File</u>

# 5.2.3 - Number of students qualifying in state/ national/ international level examinations during the year

# 5.2.3.1 - Number of students who qualified in state/ national/ international examinations (e.g.: IIT-JAM/NET/SET/JRF/ GATE /GMAT /CAT/ GRE/ TOEFL/Civil Services/State government examinations) during the year

### 151

File Description	Documents
Upload supporting data for students/alumni	<u>View File</u>
Any additional information	<u>View File</u>

### 5.3 - Student Participation and Activities

# 5.3.1 - Number of awards/medals for outstanding performance in sports and/or cultural activities at inter-university / state /national / international events (award for a team event should be counted as one) during the year

**57** 

File Description	Documents
e-copies of award letters and certificates	<u>View File</u>
Any additional information	<u>View File</u>

### 5.3.2 - Presence of an active Student Council and representation of students in academic and administrative bodies/committees of the institution

Institute provides opportunity to students to represent on academic and administrative bodies/committees. Every year, all the departments identifies two representatives from each semester preferably one boy and one girl. Principal meets all the representatives at least once in a semester after the first internals and discusses about the courses offered, teaching methodology and the evaluation process. Institute encourages number of activities that are hosting under the banner of different clubs/forums/professional societies. Throughout the year numerous activities are organized for students to trail their hobbies. To mention few, institute regularly sponsors students team to participate in SAE Aero design west, USA, UAV competition at Maryland and Bharath Formula Electric Karting competition. The students participate in the Faculty feedback every semester and institute feedback every year. All departments organize at least two guest lectures every semester delivered by the industrial experts and/or academicians from institutes of eminence which helps students to interact and expose themselves to state of t heart research. In most of the departments, at least two students from the final year are invited for the BOS meeting to share their views on the curriculum and evaluation. Apart from this, 2 student members are invited for the IQAC meeting. The students participate in community services and extension activities through NSS, women cell and clubs. Every year, institute recognizes the best student from each programme and best outgoing student from the institute. MSRIT has also embarked gold medal for the rank holders from each programme.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://msrit.edu/

### 5.3.3 - Number of sports and cultural events / competitions organised by the institution

6

File Description	Documents
Report of the event	<u>View File</u>
List of sports and cultural events / competitions organised per year	<u>View File</u>
Upload any additional information	No File Uploaded

### 5.4 - Alumni Engagement

5.4.1 - The Alumni Association and its Chapters (registered and functional) contribute significantly to the development of the institution through financial and other support services

The alumni association of MSRIT has served as a bridge in promoting interactions and fostering relationships among alumni, students, staff and management. There is a separate alumni portal (www.msritalumni.com) where alumni can interact. The portal has more than 14500 members from all over the world. Current activities of the association are:

- 1. Scholarships to students: The association initiated Merit and Means scholarships. It was initiated to financially assist the deserving students of MSRIT based on 80 of their merit and 20 of their means. The amount of scholarship per student is Rs 10000/ and every year around 40 to 50 students are awarded this scholarship.
- 2. Krishna P Godasi Scholarship Grant full tuition fees for the entire B.E. / B. Arch course provided to students who meet the required criteria. About 20-30 students are awarded this scholarship every year.
- 3. GMW Aspire Foundation Scholarship Provides a Scholarship of Rs.1,00,000 through GMW Aspire Foundation which is an initiative by our distinguished alumni Sri Jasbir Singh.
- 4. Project Funding: MSRIT AA funds an amount of Rs. 1.3 to 1.5 Lakh every year towards UG / PG Student Projects.
- 5. Gold Medals: Gold Medals instituted by alumni in various departments are awarded to first-rank holders during the graduation day ceremony.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	https://www.msritalumni.com/page/Scholars hips.dz

# **5.4.2 - Alumni's financial contribution** during the year

Α.	?	15	Lakhs
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File Description	Documents
Upload any additional information	<u>View File</u>

### 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
- M. S. Ramaiah Institute of Technology was established in the year 1962.

Vision: To be an Institution of International Eminence, renowned for imparting quality technical education, cutting-edge research and innovation to meet global socio-economic needs.

Mission: MSRIT shall meet the global socio economic needs through

- 1. Imparting quality technical education by nurturing a conducive learning environment through continuous improvement and customization.
- 2. Establishing research clusters in emerging areas in collaboration with globally reputed organizations.
- 3. Establishing innovative skills development, technoentrepreneurial activities and consultancy for socio-economic needs.

The Vision and Mission of the Institution is to provide quality technical education, cutting-edge research and innovation to

address socio-economic needs. To meet these objectives, the institution has formed various bodies/committees. The administration is supervised by the Governing Body (GB) & constitutes the Directors of the Institution, eminent academicians, renowned industrialists, the Principal and a few senior faculties. The GB approves the Vision and Mission, strategic plan, establishment of new programs of study leading to degrees, plan for the infrastructure development of the institute. The GB meets twice a year and reviews the progress /growth of the institution The institution has well defined organizational structure.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	https://msrit.edu/gov-others.html

### 6.1.2 - Effective leadership is reflected in various institutional practices such as decentralization and participative management

M S Ramaiah Institute of Technology practices a culture of participative management (decentralized structure), by involving faculty members in a number of administrative roles in various academic and non-academic committees and many other decision-making committees of the Institute.

Decentralization of Administrative/Academic Powers:

The Principal leads the academic and administrative process in the institution. Vice-Principal, Registrar Academic, Registrar Administration, Registrar Admission, Controller of Examination and Heads of the Department also help the Principal in academic and administrative activities.

Some of the senior faculty are members of various decisionmaking bodies and committees such as Governing Body, Academic Council, Board of Studies, R&D committee, IQAC.

Delegation of Financial Powers:

The Chief Executive and Chief of Finance lead the finance process. The Finance Committee helps in executing the financial activities & comprises CE, CoF, the Principal and a few senior faculties. The Finance Committee allocates the budget to each

department in discussion with the department heads & is appraised to the Governing Body for approval.

All HODs are financially permitted to take financial decisions up to Rs. 5.00 Lakh per annum.

The Principal of the institute is financially permitted to utilize up to Rs.25.00 Lakh per annum for the day-to-day activities in the institution.

File Description	Documents
Upload strategic plan and deployment documents on the website	<u>View File</u>
Upload any additional information	<u>View File</u>
Paste link for additional Information	https://msrit.edu/gov- others.html#governing

#### 6.2 - Strategy Development and Deployment

# 6.2.1 - The institutional Strategic/ Perspective plan has been clearly articulated and implemented

The strategic plan of M S Ramaiah Institute of Technology (MSRIT) for 2020-30 is based on recognizing the Vision, Mission and core values of the institute. Goals and strategies were developed to achieve significant progress towards the institute's aspiration of becoming one of the nation's leading technical institute in teaching, research and development. The strategic plan emphasizes the institution's role as a premier institution that provides quality technical education and career guidance to a broad array of students.

The strategic plan of MSRIT identifies four key themes as follows:

Theme 1: Quality of Teaching Learning process with Outcome Based Education.

Theme 2: Quality Research, Innovation, and Creativity programs.

Theme 3: Outreach and Engagement.

#### Theme 4: Efficient and Effective Management

Quality Research, Innovation, and Creativity programs:

There has been a major thrust on R&D in the past decade at MSRIT. It was planned to improve research culture among faculty and improve the number of full time Ph. D scholars. Many students are taking up internships abroad. 9 Centre of Excellences are being established to cater to the research requirements and to enhance fulltime Ph. D scholars. Faculty are provided with Seed grant (more than 5 lakhs) to initiate inhouse research.

File Description	Documents
Strategic Plan and deployment documents on the website	<u>View File</u>
Paste link for additional information	<pre>http://www.msrit- iqac.com/assets/img/RoadMapPrint.pdf</pre>
Upload any additional information	<u>View File</u>

6.2.2 - The functioning of the various institutional bodies is effective and efficient as visible from the policies, administrative set-up, appointment and service rules, procedures, etc.

The institution has a well-defined organizational structure and roles and responsibilities. The institution has well-defined rules for effective governance in Administration and Academic activities.

#### Functions of Governing Body:

- Governing Body normally meets twice a year.
- Approves starting new programs of study leading to degrees.
- Plans the infrastructure development of the Institute.
- Approves the budget submitted by the Finance Committee.

#### Functions of Academic Council:

The Academic Council normally meets once a year. Scrutinize and approve the proposals with or without modification of the Boards of Studies with regard to courses of study, academic regulations, Curricula, syllabi and modifications thereof, instructional and evaluation arrangements, methods, procedures

relevant thereto, etc.

Functions of Finance Committee:

Finance Committee normally meets once a year to prepare the Budget for the Institute and Autonomous Examinations.

#### Recruitment:

Head of the Departments will submit requirements for faculty to the Principal. An advertisement is given in the leading newspapers. Eligible candidates are called for an interview shortlisted by the department.

#### Promotional Policies:

Normally once a year, Management considers applications from such of those staff members who have improved their qualifications (for example obtained a Ph. D) and promotes them if they satisfy all the criteria stipulated by AICTE.

File Description	Documents
Paste link to Organogram on the institution webpage	https://msrit-bucket.s3-us- west-2.amazonaws.com/Organogram.png
Upload any additional information	<u>View File</u>
Paste link for additional Information	https://msrit.edu/

6.2.3 - Implementation of e-governance in	A.	All	of	the	above	
areas of operation: Administration Finance						
and Accounts Student Admission and						
<b>Support Examination</b>						

File Description	Documents
ERP (Enterprise Resource Planning) Documen	<u>View File</u>
Screen shots of user interfaces	<u>View File</u>
Details of implementation of e- governance in areas of operation	<u>View File</u>
Any additional information	<u>View File</u>

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

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

#### WELFARE MEASURES FOR TEACHING STAFF

- 1. Encashment of Earned leave as per the norms.
- 2. Support for skill upgradation- provide OOD and registration fees, travel allowance to participate in technical seminars and workshops
- 3. Retirement benefits
- 4. Employees Family Welfare Fund:

Retirement - Principal amount that is contributed to the fund, Incase of death - Rs. 100000/-

- 5. Medical Insurance to employees and their families and students Amount spent on medical insurance for teaching and nonteaching staff in the last year is Amount spent on medical insurance for students in the last year is Rs.
- 6. Medical expenses other than health insurance policy is provided for the staff and their family members who are treated in M. S. Ramaiah Hospitals to the maximum amount of Rs. 1,00,000/- per year per member.
- 7. Providing Fee Concession in College Seats to the wards of teaching faculty
- 8. Share is given in consultancy activities for teaching staff

- 9. Festival Advance for non-teaching staff
- 10. Time-bound Increments for non-teaching staff
- 11. Transport facility for staff

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://www.starhealth.in/

# 6.3.2 - Number of teachers provided with financial support to attend conferences / workshops and towards payment of membership fee of professional bodies during the year

16

File Description	Documents
Upload any additional information	<u>View File</u>
Details of teachers provided with financial support to attend conference, workshops etc during the year (Data Template)	<u>View File</u>

# 6.3.3 - Number of professional development / administrative training programmes organized by the Institution for its teaching and non-teaching staff during the year

70

File Description	Documents
Reports of the Human Resource Development Centres (UGC HRDC/ASC or other relevant centres)	<u>View File</u>
Upload any additional information	<u>View File</u>

# 6.3.4 - Number of teachers who have undergone online/ face-to-face Faculty Development Programmes during the year: (Professional Development Programmes, Orientation / Induction Programmes, Refresher Courses, Short-Term Course, etc.)

324

File Description	Documents
Summary of the IQAC report	<u>View File</u>
Reports of the Human Resource Development Centres (UGC ASC or other relevant centers)	<u>View File</u>
Upload any additional information	<u>View File</u>

#### 6.4 - Financial Management and Resource Mobilization

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

Institution conducts internal and external financial audits regularly

The institute conducts regular financial audits. The institute has a formal mechanism for internal and external audits. The accounts are regularly audited to ensure financial compliance.

#### Internal Audit:

The internal audit is a continuous process. The finance committee and the Qualified Auditors from external agencies have been appointed and a team of staff under them do a methodical verification. The team verifies all payments, receipts, vouchers of the cash transactions, ledgers and cashbook. Process audit of the accounts is done by IQAC cell of the institute twice a year.

External Audit: The external auditor/agency, B. N. Subramanya & Co., Charted Accountants, appointed by the Management performs audit of the financial statements of the college. The financial records are audited by qualified chartered accountants at the end of each financial year. The financial records are certified i.e., income and expenditures, balance sheet and prepared notes to accounts are certified. The funded projects are also audited by the external auditors. The Institution publishes audited financial statements on the institutions website as information for the concerned people.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://s3.ap-south-1.amazonaws.com/www.m srit-iqac.com/assets/Financial+Audited+St atement+2021-2022.pdf

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

#### 40.35

File Description	Documents
Annual statements of accounts	<u>View File</u>
Details of funds / grants received from non-government bodies, individuals, philanthropists during the year	<u>View File</u>
Any additional information	<u>View File</u>

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

Mobilisation of funds in the institute is through several sources. The primary source is through tuition fees of students. In addition, financial assistance is obtained through external research projects and by carrying out extensive consultancy works. The interest generated on the corpus also contributes towards the income.

#### M.S RAMAIAH INSTITUTE OF TECHNOLOGY

#### INCOME AND EXPENDITURE ACCOUNT

The major part of the expenditure is spent on salaries and other benefits for teaching and non-teaching staff. Various expenditures are planned by taking input from departments and section heads. The budget for departments and sections are prepared by taking procurement of equipment, conduction of workshops and conferences, travel expenses, maintenance of equipment and laboratories. Recurring expenses such as chemicals, glass wares, stationaries are taken in to consideration before finalising the budget every year. The planned budget is scrutinized by the finance committee before

approval. Quarterly meetings are conducted to check the expenditure of various departments. The budget for library, seed money for projects, incentive for publications, stipend for full time research scholars, sports, maintenance department, centralised computer maintenance, housekeeping are taken into account before finalising the budget for the financial year. The resources for scholarships are generated through government and non-government organizations.

File Description	Documents	
Upload any additional information	<u>View File</u>	
Paste link for additional Information	https://s3.ap-south-1.amazonaws.com/www.m srit-iqac.com/assets/Financial+Audited+St atement+2021-2022.pdf	

#### 6.5 - Internal Quality Assurance System

6.5.1 - Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing quality assurance strategies and processes visible in terms of incremental improvements made during the preceding year with regard to quality (in case of the First Cycle): Incremental improvements made during the preceding year with regard to quality and post-accreditation quality initiatives (Second and subsequent cycles)

The Internal Quality Assurance Cell of MSRIT has Self-regulated responsibilities, aimed at Continuous quality improvement and achieving overall excellence. M S Ramaiah Institute of Technology has an IQAC Cell and adopts a participatory approach in managing its provisions.

The IQAC has expressively contributed towards improving Curriculum enrichment, Academic Excellence, Teaching and Learning Process, Evaluation Methods and Research atmosphere in the institution. The goals defined & two of the practices of IQAC are as follows:

- 1. Academic Audits: Regular audits are conducted internally after every semester by senior faculty. The coordinator identifies the auditors to all the departments.
- 2. Internal Audits: IQAC conducts regular internal audits. 40 senior faculties are identified as IQAC auditors. During semester end, there will be an audit by internal auditors of all Teaching and non-teaching departments and administrative offices. Any deviation, departments are suggested for improvements.

External Audits: To strengthen the quality system, since 2013 Academic Audits by external agencies have also been initiated. Every year, external academic audit is conducted.

Pedagogy and Skill Upgradation Trainings:

IQAC initiates the Pedagogy training programmes for all the faculty. Since 2013 Pedagogy trainings are initiated by IQAC and all the faculty are trained in Outcome Based Education and assessment.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://naac.msrit.edu/IQAC/index.html

6.5.2 - The institution reviews its teaching-learning process, structures and methodologies of operation and learning outcomes at periodic intervals through its IQAC as per norms

Programme Assessment Committee Review: Programme assessment Committee (PAC) review is essential to understand the attainment levels of the students in terms of knowledge, skill and attitude component. The attainment of COs and POs are calculated based on the procedures defined by IQAC. The recommendations of PAC are considered for the curriculum revision and to improve teaching learning methodologies. The attainments of all COs and POs of UG and PG programmes are audited by IQAC.

Industry Participation: Enhancement of industry interaction in teaching-learning is essential to improve the outcomes of the students and to enhance the knowledge and skill of the faculty.

Internships: As per the IQAC procedures, an industry internship for the students (both UG & PG) for a period of 3 to 4 weeks has been made mandatory.

Curriculum design: As per IQAC procedures, Curriculum is designed by taking feedback from the industry. The academic Council, Board of Studies and Department Advisory Boards have the participation of experts from the industry, and have helped in revising the curriculum to industrial requirements.

Teaching and Learning by Industry Experts: IQAC encourages the

departments to involve industry personnel in the partial delivery of the courses, Faculty Development Programmes, Workshops, Seminars and Technical Talks.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional information	https://naac.msrit.edu/IQAC/index.html

- 6.5.3 Quality assurance initiatives of the institution include Regular meeting of the IQAC Feedback collected, analysed and used for improvement of the institution Collaborative quality initiatives with other institution(s) Participation in NIRF Any other quality audit recognized by state, national or international agencies (such as ISO Certification)
- A. Any 4 or all of the above

File Description	Documents
Paste the web link of annual reports of the Institution	https://s3.ap-south-1.amazonaws.com/www.m srit-iqac.com/assets/AQAR+DOCS/IQAC+-+Aca demic+and+Administrative+Audit-+Review+Re port+-+Internal+and+External.pdf
Upload e-copies of accreditations and certification	<u>View File</u>
Upload details of quality assurance initiatives of the institution	<u>View File</u>
Upload any additional information	<u>View File</u>

#### 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 year

To promote Gender Equity and spread awareness of social responsibilities, Ramaiah Institute of Technology has conducted various events over the period (till date). Our activities include organizing events to promote the participation of women

in the broader engineering scope, as well as placing an emphasis on outreach to empower local communities. Internally, we have several hallmark events that focus on Gender Equity and promote equal participation. Our annual IEEE Women in Engineering Fest is a multiple-day fest that emphasizes the continued pursuit of engineering disciplines by women, held every March by our students, the event consists of several technical and non-technical activities, some exclusively for women, which promote interest in engineering and inclusiveness. All students collaborate to make these events a success, regardless of gender, and women are actively encouraged to participate. Ramaiah's proud sporting pedigree stems from events like the State Level Inter Colleges Basketball Tournament (2022) Chess, Badminton, etc., where both men and women can compete with the best teams from the state. Continuing with our work till today, Ramaiah Institute of Technology looks forward to actively promoting Gender Equity and awareness of social responsibility for the progress of society in the future.

File Description	Documents
Upload any additional information	<u>View File</u>
Paste link for additional Information	https://s3.ap-south-1.amazonaws.com/www.msrit-iqac.com/assets/img/7.1.1-Sports+Achievements+Photos+with+details+2021-22.pdf

# 7.1.2 - The Institution has facilities for alternate sources of energy and energy conservation: Solar energy Biogas plant Wheeling to the Grid Sensor-based energy conservation Use of LED bulbs/power-efficient equipment

A. Any 4 or All of the above

File Description	Documents
Geotagged Photographs	<u>View File</u>
Any other relevant information	<u>View File</u>

7.1.3 - Describe the facilities in the institution for the management of the following types of degradable and non-degradable waste (within a maximum of 200 words)

Solid Waste Management: MSRIT established a good solid waste management procedure. Separate bins are provided in all the

floors and all the blocks to collect segregated dry waste, wet waste and e-waste. Dry waste and e-waste generated in the institution and majority of the wet waste is generated in the hostels and canteens. Collected dry waste is collected and segregated into recyclable plastic and paper waste and the same is sent for recycle. Construction and Demolition waste are being utilized as recycled aggregate in Civil Engineering. Department for substitution of natural aggregates in concrete.

Liquid Waste Management: The liquid waste coming from various laboratories, toilets and other sources are treated in effluent treatment plant and the treated water is used for flushing the toilets and gardening purposes.

E-Waste Management: The e-waste generated is collected and dumped in a safe place. The proper care is taken as per the directions of the pollution control board. The collected e-waste is supplied to Premier Comprint, an e-waste management company.

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

# 7.1.4 - Water conservation facilities available in the Institution: Rain water harvesting Bore well /Open well recharge Construction of tanks and bunds Waste water recycling Maintenance of water bodies and distribution system in the campus

Α.	Any	4	or	all	of	the	above
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File Description	Documents
Geotagged photographs / videos of the facilities	<u>View File</u>
Any other relevant information	<u>View File</u>

#### 7.1.5 - Green campus initiatives include

# 7.1.5.1 - The institutional initiatives for greening the campus are as follows:

- A. Any 4 or All of the above
- 1. Restricted entry of automobiles
- 2. Use of bicycles/ Battery-powered vehicles
- 3. Pedestrian-friendly pathways
- 4. Ban on use of plastic
- 5. Landscaping

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

#### 7.1.6 - Quality audits on environment and energy undertaken by the institution

# 7.1.6.1 - The institution's initiatives to preserve and improve the environment and harness energy are confirmed through the following:

C. Any 2 of the above

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

File Description	Documents
Reports on environment and energy audits submitted by the auditing agency	<u>View File</u>
Certification by the auditing agency	<u>View File</u>
Certificates of the awards received	<u>View File</u>
Any other relevant information	<u>View File</u>

- 7.1.7 The Institution has a disabled-friendly and barrier-free environment:
  Ramps/lifts for easy access to classrooms and centres Disabled-friendly washrooms
  Signage including tactile path lights,
  display boards and signposts Assistive technology and facilities for persons with disabilities: accessible website, screen-reading software, mechanized equipment, etc. Provision for enquiry and information:
  Human assistance, reader, scribe, soft copies of reading materials, screen reading, etc.
- A. Any 4 or all of the above

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

7.1.8 - Describe the Institutional efforts/initiatives in providing an inclusive environment i.e. tolerance and harmony towards cultural, regional, linguistic, communal, socio-economic and other diversities (within a maximum of 200 words).

The institution has been taking several efforts and initiatives in providing an inclusive environment i.e., tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and other diversities. By celebrating many National and International Days, Events and Festivals the institution aims at bringing tolerance and harmony among the students and staff and other stakeholders.

S1.No Activity Activity Date Number of participants 1
Independence Day 15-08-2021 130 2 Engineers Day 15-09-2021 150
3 Republic Day 26-01-2022 250 4 Womens Day 08-03-2022 250 5
Karnataka Formation Day 07-11-2021 180 6 Teachers Day
05-09-2021 380

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

7.1.9 - Sensitization of students and employees of the institution to constitutional obligations: values, rights, duties and responsibilities of citizens:

M S Ramaiah Institute of Technology sensitizes the students and the employees of the institution to the constitutional obligations about values, rights, duties, and responsibilities of citizens which enables them to conduct themselves as responsible citizens. To equip students with the knowledge, skill, and values that are necessary for sustaining one's balance between a livelihood and life by providing an effective, supportive, safe, accessible, and affordable learning environment. The students are inspired by participating in various programs on culture, traditions, values, duties, and responsibilities by inviting prominent people. The institute conducted awareness programs on the ban on plastics, cleanliness, Swachh Bharat, etc. involving students. The college establishes policies that reflect core values. Major Initiatives during this academic year are:

- Vigilance Awareness Week: 'Integrity A way of Life 'To spread awareness regarding sanitation, living standards of life, and knowing one's personality.
- A separate NSS unit is exclusively present to encourage the students and the unit is successfully conducting activities to serve the society.
- Blood donation camps, Guest lectures and workshops are arranged by eminent personalities to deliver lectures on ethics, values, duties, and responsibilities and on saving the environment.

File Description	Documents
Details of activities that inculcate values necessary to transform students into responsible citizens	<u>View File</u>
Any other relevant information	<u>View File</u>

7.1.10 - The institution has a prescribed

A. All of the above

code of conduct for students, teachers, administrators and other staff and conducts periodic sensitization programmes in this regard: The Code of Conduct is displayed on the website There is a committee to monitor adherence to the Code of Conduct Institution organizes professional ethics programmes for students, teachers, administrators and other staff Annual awareness programmes on the Code of Conduct are organized

File Description	Documents
Code of Ethics - policy document	<u>View File</u>
Details of the monitoring committee composition and minutes of the committee meeting, number of programmes organized, reports on the various programmes, etc. in support of the claims	<u>View File</u>
Any other relevant information	<u>View File</u>

### 7.1.11 - Institution celebrates / organizes national and international commemorative days, events and festivals

National Festivals are celebrated with enthusiasm. Every year the institute organizes national festivals and birth/death anniversaries of great Indian personalities. These National festivals are celebrated to make the students aware of their contribution to the nation. The activities like Teachers Day, Engineers Day, Republic Day, Independence Day and birthdays of great Indian personalities are celebrated regularly.

The following is a list of the major events that are celebrated

- 1. Republic Day
- 2. Independence Day
- 3. Gandhi Jayanthi
- 4. International Yoga Day

- 5. Teachers Day
- 6. Engineers Day
- 7. Rashtriya Ekta Diwas
- 8. Ambedkar Jayanthi
- 9. Kanakadasa Jayanthi
- 10. Valmiki Jayanthi

File Description	Documents
Annual report of the celebrations and commemorative events for during the year	<u>View File</u>
Geotagged photographs of some of the events	<u>View File</u>
Any other relevant information	<u>View File</u>

#### 7.2 - Best Practices

- 7.2.1 Provide the weblink on the Institutional website regarding the Best practices as per the prescribed format of NAAC
- 1. Title of the Practice
- a. Implement outcome-based education in Undergraduate and Postgraduate programs.
- b. Research promotional policy to improve RnD Activities, Ranking and Accreditation.
- 2. Objectives of the Practice
- a. Effective Implementation of outcome-based education for improving graduate attributes and getting accreditation from the National Board of Accreditation. The change of accreditation from the output put model to the Outcome model was a major challenge.
- b. Enhancing the research publications in peer-reviewed journals and conferences to improve the Research and Consultancy component in the NIRF Ranking has imposed a great

challenge to improve the research culture in the Institution.

#### 3. The Context

- a. M S Ramaiah Institute Technology is an esteemed institution with highly experienced faculty. Changing the mindset of the faculty from an output model system to an outcome model was a major challenge.
- b. M S Ramaiah Institute Technology is well established teaching institution. Changing the orientation of faculty from teaching, enhancing the research culture and encouraging the faculty to improve the qualification from PG to Ph.D. was a major challenge.

#### 4. The Practice

a. With reference to the implementation of outcome-based education the main constraint was to train the faculty to understand the concept of Vision, Mission, Program educational objectives, Program Outcomes, Course Outcomes and mapping of the same. Modifying the curriculum by involving the stakeholders and collecting feedback from stakeholders and summarising the same with reference to curriculum changes. Involving the Industry in curriculum design and delivery was a major challenge.

File Description	Documents
Best practices in the Institutional website	https://s3.amazonaws.com/naac.msrit.edu/n ew_downloads/Best+Practices.pdf
Any other relevant information	https://msrit-bucket.s3-us-west-2.amazona ws.com/Uploads/ResearchPolicy.pdf

#### 7.3 - Institutional Distinctiveness

7.3.1 - Highlight the performance of the institution in an area distinct to its priority and thrust (within a maximum of 200 words)

M S Ramaiah Institute of Technology has provided tremendous thrust and priority to its Program of Diversity Inclusion and Integration - an area distinctive to the Vision of the College. The Vision of the institute is to be an Institution of International Eminence, renowned for imparting quality

technical education, cutting edge research and innovation to meet global socio-economic needs. The institute emphasizes on outcome based education and project based learning for imparting quality technical education and offer skill based training programs to enhance the skill set of the students. The institute has established many research centres in collaboration with the leading institutions across the globe to promote cutting edge research and to promote international collaborations with industrial academia. The institute always encourages to carry out research and innovation to cater the needs of the society for the economic upliftment. M S Ramaiah Institute of Technology adopted all the best practices like use of renewable energy resources, waste water cycle, solid waste disposal. Major thrust or importance is given to carry out societal activities such blood donation camp, computer training to the government school students. Distribution of study materials to the students, creating awareness on hygiene, drinking water and safety for the local community.

File Description	Documents
Appropriate link in the institutional website	https://www.msrit.edu/research/coe.html; https://www.msrit.edu/department/int-411. html
Any other relevant information	<u>View File</u>

#### 7.3.2 - Plan of action for the next academic year

Future Plans of Action for Next Academic Year:

MSRIT IQAC has identified the broad objectives which the College should strive to achieve during this period, which is enumerated as under -

- 1. The institution plans to focus more on research and Development in the next Academic year by increasing the publications of faculty and also motivating the student community to write research papers.
- 2.Conducting student focused academic and skills development activities.
- 3.To have more industry academic interface so that there is more corporate participation in academics.

13-09-2023 10:02:23

- 4.An effort to collaborate initiatives of Industry-Academia and Alumni for the development of students.
- 5.Organize various student and faculty development programs.
- 6.To recruit and retain well qualified motivated faculty.
- 7. To obtain a better NIRF Ranking.
- 8.To arrange career guidance programmes.
- 9. To facilitate continuous upgradation and updation of knowledge & use of technology, by faculty and students.
- 10.To create awareness and initiate measures for Protecting and Promoting Environment.
- 11. To give additional thrust to Blended mode of Teaching.