



## YEARLY STATUS REPORT - 2020-2021

### Part A

#### Data of the Institution

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

• Financial Status	<b>Self-financing</b>				
• Name of the IQAC Co-ordinator/Director	<b>Dr. G M Madhu</b>				
• Phone No.	<b>08023603122</b>				
• Mobile No:	<b>9845381349</b>				
• IQAC e-mail ID	<b>iqac@msrit.edu</b>				
<b>3. Website address (Web link of the AQAR (Previous Academic Year))</b>	<a href="http://www.msrit-igac.com/assets/img/AOAR_REPORT_2019_2020.pdf">http://www.msrit-igac.com/assets/img/AOAR_REPORT_2019_2020.pdf</a>				
<b>4. Was the Academic Calendar prepared for that year?</b>	<b>Yes</b>				
• if yes, whether it is uploaded in the Institutional website Web link:	<a href="http://www.msrit-igac.com/assets/img/reports/Academic%20Calendar/Academic_Calendar_2020_2021.pdf">http://www.msrit-igac.com/assets/img/reports/Academic%20Calendar/Academic_Calendar_2020_2021.pdf</a>				
<b>5. Accreditation Details</b>					
Cycle	Grade	CGPA	Year of Accreditation	Validity from	Validity to
<b>Cycle 2</b>	<b>A+</b>	<b>3.28</b>	<b>2021</b>	<b>01/03/2021</b>	<b>28/02/2026</b>
<b>6. Date of Establishment of IQAC</b>			<b>01/10/2014</b>		
<b>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/CPE of UGC, etc.)?</b>					
Institution/ Department/Faculty/School	Scheme	Funding Agency	Year of Award with Duration	Amount	
<b>Nil</b>	<b>Nil</b>	<b>Nil</b>	<b>Nil</b>	<b>Nil</b>	
<b>8. Provide details regarding the composition of the IQAC:</b>					
• Upload the latest notification regarding the composition of the IQAC by the HEI	<a href="#">View File</a>				
<b>9. No. of IQAC meetings held during the year</b>			<b>5</b>		
• Were the minutes of IQAC meeting(s) and	<b>Yes</b>				

compliance to the decisions taken uploaded on the institutional website?		
<ul style="list-style-type: none"> <li>If No, please upload the minutes of the meeting(s) and Action Taken Report</li> </ul>	No File Uploaded	
<b>10. Did IQAC receive funding from any funding agency to support its activities during the year?</b>	<b>No</b>	
<ul style="list-style-type: none"> <li>If yes, mention the amount</li> </ul>		
<b>11. Significant contributions made by IQAC during the current year (maximum five bullets)</b>		
<ul style="list-style-type: none"> <li>Initiation and support in preparing the SSR for the 2nd cycle of NAAC accreditation</li> </ul>		
<ul style="list-style-type: none"> <li>Outcomes Based Education (OBE) is an initiation by IQAC to reform the teaching and learning process in the institution.</li> </ul>		
<ul style="list-style-type: none"> <li>To inculcate self-learning capabilities, IQAC encouraged for online certification courses such as NPTEL, Swayam, Course era etc.</li> </ul>		
<ul style="list-style-type: none"> <li>IQAC suggests the departments to conduct the workshops /FDPs /seminars/ conferences in the emerging areas</li> </ul>		
<ul style="list-style-type: none"> <li>Support during the visits of NBA and UGC committees and NIRF Ranking</li> </ul>		
<b>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:</b>		

Plan of Action	Achievements/Outcomes
To conduct at least two international conferences	Department of Mechanical, Civil, Chemical, BioTechnology and IEM organized an international conference during September 2018 2) Department of EEE, ECE, TCE, EIE, CSE, MCA, ISE and ML organized an international conference during October 2018.
To submit compliance report of 4 UG programmes to NBA	Submitted applications and NBA committee visited on 4/2/2019 and accorded 3 years of accreditation to all the 4 UG programmes
To participate in NIRF	Submitted the application and institute Ranked 64th among 100 institution across India.
To submit applications of 10 Programmes for NBA accreditation	Submitted applications for 8 UG programmes and 2 PG programmes.. 2) NBA committee visited for the 4 UG programmes in September 2021 and all the programs are accredited for 3 years
To apply extension of 11 R&D centres and one new R&D centre	Application submitted to all the 12 departments. VTU LIC committee visited the institute on 12/2/2019. 11 departments obtained extension of research center and 01 department has been recognised as research center.
To prepare for VTU LIC visit	Successfully completed the visit
Application to AISHE	Submitted the application to AISHE on 02/2/2022 for the academic year 2020-21
To organize workshops/FDPs in collaboration with industry.	Most of the departments have organized the workshops/FDPs in collaboration with industry.
<b>13. Was the AQAR placed before the statutory</b>	<b>Yes</b>

<b>body?</b>	
<ul style="list-style-type: none"> <li>Name of the statutory body</li> </ul>	
Name of the statutory body	Date of meeting(s)
<b>Academic Council</b>	<b>23/04/2021</b>
<b>14. Was the institutional data submitted to AISHE ?</b>	<b>Yes</b>
<ul style="list-style-type: none"> <li>Year</li> </ul>	
Year	Date of Submission
<b>02/06/2021</b>	<b>02/02/2022</b>

## Extended Profile

### 1. Programme

1.1 **28**

Number of programmes offered during the year:

File Description	Documents
Institutional Data in Prescribed Format	<a href="#">View File</a>

### 2. Student

2.1 **6086**

Total number of students during the year:

File Description	Documents
Institutional data in Prescribed format	<a href="#">View File</a>

2.2 **1283**

Number of outgoing / final year students during the year:

File Description	Documents
Institutional Data in Prescribed Format	<a href="#">View File</a>

2.3

6040

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

File Description	Documents
Institutional Data in Prescribed Format	<a href="#">View File</a>

### 3.Academic

3.1

909

Number of courses in all programmes during the year:

File Description	Documents
Institutional Data in Prescribed Format	<a href="#">View File</a>

3.2

383

Number of full-time teachers during the year:

## Extended Profile

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Institutional Data in Prescribed Format	<a href="#">View File</a>

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Institutional Data in Prescribed Format	<a href="#">View File</a>

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File Description	Documents
Institutional Data in Prescribed Format	<a href="#">View File</a>

### 3. Academic

3.1 909

Number of courses in all programmes during the year:

File Description	Documents
Institutional Data in Prescribed Format	<a href="#">View File</a>

3.2	383
Number of full-time teachers during the year:	
File Description	Documents
Institutional Data in Prescribed Format	<a href="#">View File</a>
3.3	319
Number of sanctioned posts for the year:	
<b>4.Institution</b>	
4.1	1624
Number of seats earmarked for reserved categories as per GOI/State Government during the year:	
4.2	131
Total number of Classrooms and Seminar halls	
4.3	3605
Total number of computers on campus for academic purposes	
4.4	3016.45
Total expenditure, excluding salary, during the year (INR in Lakhs):	

## 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 Primary objective of the institute is to create Techno-Managerial power for the global needs. 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, in particular, the types of courses, the number of electives, and the curricular structure, with complete details of the course title and course contents as per the regulations.
- 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. Specific to every program, we have 3-5 Program Educational Objectives (PEOs) that are measured through the performance of the alumni.

The Institute keenly observes the attainments of Program Outcomes (POs) of NBA and the Program Specific Outcomes (PSOs) for the respective programs which intern relates to Vision and Mission of the institution and Department as well.

### Process for Curriculum Design:

The initial version of the curriculum is prepared by having the above design criteria, through discussions with stakeholders. The proposed curriculum is then discussed in DAB (Department Advisory Board) and is put forth to BOS (Board of Studies) where the experts from industry, academia, Alumni in addition to senior faculty members. The curriculum is then placed for approval during the Academic Council (AC).

The academic autonomy of the Institution provides the opportunity to frequently revise the curriculum based on needs and suggestions

from various stake holders. Revision of the curriculum focuses mainly on introducing new courses with multiple facets for improving the soft skills, general aptitude and technical aptitude.

The students are made mandatory to upgrade their knowledge by undergoing MOOCS courses through NPTEL. Further the Internship made compulsory for all the students and as a result the student can upgrade the knowledge base in diversified fields. In addition to the curriculum, student's skills are upgraded by conducting various value added courses and become industry ready.

File Description	Documents
Upload additional information, if any	<a href="#">View File</a>
Link for additional information	<a href="http://www.msrit-igac.com/Syllabus_20-21.html">http://www.msrit-igac.com/Syllabus_20-21.html</a>

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

28

File Description	Documents
Minutes of relevant Academic Council/BOS meeting	<a href="#">View File</a>
Details of syllabus revision during the year	<a href="#">View File</a>
Any additional information	No File Uploaded

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

143

File Description	Documents
Curriculum / Syllabus of such courses	<a href="#">View File</a>
Minutes of the Boards of Studies/ Academic Council meetings with approval for these courses	<a href="#">View File</a>
MoUs with relevant organizations for these courses, if any	<a href="#">View File</a>
Any additional information	No File Uploaded

## 1.2 - Academic Flexibility

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

143

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	<a href="#">View File</a>
Any additional information	No File Uploaded
Institutional data in prescribed format (Data Template)	<a href="#">View File</a>

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

28

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	<a href="#">View File</a>
Any additional information	No File Uploaded
List of Add on /Certificate programs (Data Template)	<a href="#">View File</a>

## 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 the Institution has organized events such as lectures by experts, spiritual gurus and experts from HR dept. of different organizations. Activities such as annual blood donation camps, visits to orphanage, periodical health checkups organized by the NSS Dept. of the institute. To address the human values, following courses are offered by the Institution:

- Human Physiology(BT406): This course deals with study of life, internal workings of organisms and interaction with the world around them.
- Food Biotechnology(BTPE08): In this course students realize the environmental, economic, and nutritional benefits food can impart, and recognize the safety of the food products with respect to human health and the environment.
- Human Resource Management: Lectures by experts organized from HR department of different organizations through placement centre.
- Yoga: Practiced in the induction program at the beginning of the semester where the students learn human psychology which make them live harmoniously.

b) Professional Ethics Courses such as Professional Communication and Constitution of India are offered for first year UG courses of all branches of Engineering. The course engineering ethics focuses on the responsibilities, engineer rights and ethics. Professional societies are also in existence in all the departments. Guest lectures, Industrial visits, Technical quiz are some of the events organized regularly. Professional societies such as IEEE, Institute of Indian Foundrymen, Student chapters are also on the campus which help the students to gain knowledge regarding the recent developments and innovations. Intellectual Property Rights course is included in all the programs. To address Professional Ethics the following courses are offered by the Institution:

- Professional Communication (HS 24): This course helps the students to learn communication and writing skills.
- Constitution of India (HS 23): This course inculcates human

rights in India.

c) **Environment and Sustainability:** Course on Environmental Studies of 2 credits have been offered for all UG programmes. To create awareness among the students about the environment and sustainability, a number of courses are introduced by the Institution:

- **Environmental studies (HS16):** deals with the issues on ethical, cross-cultural, historical context of environmental issues and the links between human and natural systems.
- **Industrial and Environment Biotechnology (BT 53):** to use modern biotechnological tools for environmental sustainability
- **Solid waste Management (CVPE 652):** sustainable methods for treatment of solid waste
- **Air Pollution and Control (CVE 744):** deals with the impact on health due to air pollution.

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	<a href="#">View File</a>
Any additional information	No File Uploaded

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

41

File Description	Documents
List of value-added courses	<a href="#">View File</a>
Brochure or any other document relating to value-added courses	No File Uploaded
Any additional information	No File Uploaded

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

2760

File Description	Documents
List of students enrolled	<a href="#">View File</a>
Any additional information	No File Uploaded

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

975

File Description	Documents
List of programmes and number of students undertaking field projects / internships / student projects	<a href="#">View File</a>
Any additional information	No File Uploaded

## 1.4 - Feedback System

**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	<a href="https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/img/reports/Structured+Feedback/Structured+Feedback.pdf">https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/img/reports/Structured+Feedback/Structured+Feedback.pdf</a>
Upload the Action Taken Report of the feedback as recorded by the Governing Council / Syndicate / Board of Management	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

**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	<a href="https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/img/reports/Structured+Feedback/Structured+Feedback.pdf">https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/img/reports/Structured+Feedback/Structured+Feedback.pdf</a>
Any additional information	<a href="#">View File</a>

## 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

6086

File Description	Documents
Any additional information	No File Uploaded
Institutional data in prescribed format	<a href="#">View File</a>

##### 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)

1339

File Description	Documents
Any additional information	No File Uploaded
Number of seats filled against seats reserved (Data Template)	<a href="#">View File</a>

### 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.

The institution assesses the learning levels of the students in two ways at the time of the commencement of the programme. Students enrolled in various disciplines are identified as slow and advanced learners based on their +2 marks and the entry level test conducted by each department. This helps to identify the slow learners and to design special coaching sessions or tutorial sessions to bridge the gap between the slow learners and the advanced learners. The tutors of the respective classes of UG and

PG extend valid support in classifying the students with reports based on observation and class tests.

The institution organizes Orientation programmes/Induction programmes for freshers both at the college level and at the department level. The facilities in the college and the scope of the subjects being learnt are introduced in these sessions. Apart from this, sessions are also included to inculcate positive attitude and competitive spirit. This process helps as a base for monitoring the future progress of the students.

Bridge Courses are conducted at the departmental level to lift the students to the level of higher education. The Departments of Commerce and Computer Science organize bridge courses at the beginning of the academic year for the non-subject students enabling them to cope with the programme to which they are enrolled. The Department of Computer Science is conducting Bridge Course in two areas - Basics of Computers and Advances in Computer Science. The Department of English organizes Orientation / Bridge Course in Basic English Grammar to enable Tamil medium students to cope with the course. The Department of Mathematics organizes Bridge Course to all the first level UG programmes and first year students are admitted to MBA to cope with the knowledge requirement of the course opted by the student Strategies adopted for slow learners.

Remedial Classes are conducted with an aim to improve the academic performance of the slow learners, absentees and students who participate in sports and other activities. This practice helps the struggling learners to improve subject knowledge and helps them catch up into their peers.

Group Study System is also encouraged with the help of the advanced learners.

Academic and personal counseling are given to the slow learners by the tutor, mentor and the counseling cell.

Bilingual explanation and discussions are imparted to the slow learners after the class hours for better understanding

Provision of simple and standard lecture notes/course materials Strategies for the advanced learners.

Special Coaching classes for the first 5 class toppers of every class after the internal test are conducted regularly to secure



**University Ranks.**

Professional coaching classes – Foundation Course in CA and Foundation Course in Company Secretary ship (ACS) are conducted

Coaching is also given in Skill Development Programme like Communicative English, Aptitude and Placement.

Advanced learners are encouraged to enroll in MOOC Courses – Swayam, EdX

Provision of additional learning and reference material.

Assignment and Student Seminars on contemporary topics to enable them for placement.

Research Scholars are encouraged to conduct Seminars to the Final year UG and PG Students

Advanced Learners are provided coaching classes for competitive exams.

Students are encouraged to participate and present papers in various Seminars/ Conferences/ Workshops/ Inter-Collegiate Competitions organized by other colleges. Students representing the college in various inter-collegiate meets are provided with the benefit of retest.

Participation by the students in the in-house competitions such as Debate, Group Discussion, Problem Solving – Decision Making Exercises and Quiz Programmes are also encouraged.

Talented students are motivated to participate in extra-curricular activities, exhibitions and cultural competitions.

The academic achievements of the students are extremely motivated and highly praised by the College by celebrating Graduation Day every year. Students, who secured Ranks in the University Examination, are honored with Medals in the Graduation Day.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	Nil

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

Year	Number of Students	Number of Teachers
18/01/2022	6086	383

File Description	Documents
Upload any additional information	<a href="#">View File</a>

**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:

MSRIT provides an effective platform for students to develop latest skills, knowledge, attitude, values to shape their behavior in the correct manner. All departments conduct innovative programs which stimulate the creative ability of students and provide them a platform to nurture their problem-solving skills and ensure participative learning. The institute organizes annual technical fest, TECHNOVATION in which students showcase their learning in the form of innovative projects. Also, students are motivated to participate in inter college as well as national level competitions. The institute focuses on the student-centric methods of enhancing lifelong learning skills of students. Faculty members make efforts in making the learning activity more interactive by adopting the below-mentioned student-centric methods. 1.

**Experiential Learning:** Each department conducts add-on programs to support students in their experiential learning. The institution imparts the following experiential learning practices to enhance creativity and cognitive levels of the students -

Laboratory Sessions are conducted with content beyond syllabus experiments.

Summer Internship -Students get hands on training while working in the company.

Add-on Courses on latest technologies with NPTEL, ICT-IITK, SAP, Coursera etc.

Project development on latest technologies by students where they showcase their working model in the technical fest.

Industrial Visits to engage them in experiential learning while

visiting the organization.

Certification Courses (Value Added Courses) by the market experts such as Microsoft/ Google/ NSE etc. to develop their expertise

Participation in simulated events such as simulated stock exchanges or hackathons where they acquire experience of working on some real-life model. 2. Participatory Learning: In this type of learning, students participate in various activities such as seminar, group discussion, wall papers, projects, and the skill based add on courses. Students are encouraged to participate in activities where they can use their specialized technical or management skills, such as

Annual Tech Fest - It is organized every year for engineering students where selected projects are displayed at the larger platform.

Management Fest- This is organized every year by the management students in which students from different colleges participate and learn from each other.

Annual cultural program - This is organized every year for the students of the college to give a vent to their creativity.

Regular Quizzes- Quizzes are organized for student participation at intra or inter college level.

Seminar Presentation - Students develop technical skills while presenting papers in seminars.

Presentation and publishing of papers in conferences and journals - The objective is to give them exposure to learn and imbibe new skills.

MOOC Programs (NPTEL, ICT-IITK, SAP, COURSERA etc.) 3. Problem-solving methods: Departments encourage students to acquire and develop problem-solving skills. For this, college organizes expert lectures on various topics, motivate students to join MOOC courses, participate in various inter-college and intra-college technical fests and other competitions such as:

In-house summer training with project development

Regular Assignments based on problems

Mini Project development

Regular Quizzes

Case studies Discussion

Class presentations

Debates

Participation in Inter college events

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Link for additional Information	Nil

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

It is essential for the students to learn and master the latest technologies in order to be corporate ready. As a consequence, teachers are combining technology with traditional mode of instruction to engage students in long term learning. College uses Information and Communication Technology (ICT) in education to support, enhance, and optimize the delivery of education. The following tools are used by the Institute ICT Tools:

1. Projectors- Projectors are available in different classrooms/labs
2. Desktop and Laptops- Arranged at Computer Lab and Faculty cabins all over the campus.
3. Printers- They are installed at Labs, HOD Cabins and all prominent places.
4. Photocopier machines - Multifunction printers are available at all prominent places in the institute. There are four photostat machines available in campus.
5. Scanners- Multifunction printers are available at all prominent places.

6. Seminar Rooms- Three seminar halls are equipped with all digital facilities.

7. Smart Board- One smart board is installed in the campus.

8. Auditorium- It is digitally equipped with mike, projector, cameras and computer system.

9. Online Classes through Zoom, Google Meet, Microsoft Team, Google Classroom)

10. HackerRank (Online Coding Platform)- inter college competition

11. MOOC Platform (NPTEL, Coursera, SAP, Udemy, Edx etc)

12. Digital Library resources (DEL NET, MYLOFT etc).Use of ICT By Faculty

A. PowerPoint presentations- Faculties are encouraged to use power-point presentations in their teaching by using LCD's and projectors.

They are also equipped by digital library, online search engines and websites to prepare effective presentations.

B. Industry Connect- Seminar and Conference room are digitally equipped where guest lectures, expert talks and various competitions are regularly organized for students.

C. Online quiz- Faculties prepare online quiz for students after the completion of each unit with the help of GOOGLE FORMS.

D. Video Conferencing- Students are counseled with the help of Zoom / Google meet applications.

E. Video lecture- Recording of video lectures is made available to students for long term learning and future referencing.

F. Online competitions- Various technical events and management events such as Poster making, Ad-mad show, Project presentations, Business quiz, Debates, paper presentations etc. are being organized with the help of various Information Communication Tools.

G. Workshops- Teachers use various ICT tools for conducting workshops on latest methods such as SPSS, Programming languages,

simulations etc.

File Description	Documents
Provide link for webpage describing ICT enabled tools including online resources for effective teaching and learning process	<a href="https://a.impartus.com/login/#/">https://a.impartus.com/login/#/</a>
Upload any additional information	<a href="#">View File</a>

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

#### 2.3.3.1 - Number of mentors

333

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

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

An Academic Calendar is designed to streamline the activities of the institute through the duration of the term. The Academic year is divided into three semesters, Even and Odd consisting of 14 weeks each and a supplementary semester of 7 weeks during the summer. The calendar includes important information such as Internal test dates, last dates for registration and withdrawal, final examination dates etc. Once the academic calendar is ready, the lesson plans for the subjects offered during that semester is designed. The lesson plan contains class-by-class topics that are to be covered, encompassing the syllabus. The lesson plan is also designed taking into account the Course Outcomes, thereby allocating appropriate amount of time for each topic, while restricting each unit to almost equal number of classes. A teaching diary is generated, where the actual dates for the topics in the lesson plan are listed, taking into account declared holidays and other items in the academic calendar. The teaching diary is a live document during the course of the semester, and faculty regularly updates the diary during the semester by syncing it with their attendance registers. In this way, a continuous track is kept of the progress of the content delivery process during the

course of the semester.

A fortnightly report that is filled by the faculty, where the number of planned classes is compared with the number of classes actually taken in that period. If there are any deviations in the teaching diary, e.g., due to guest lectures, industrial visits etc., the faculty has to note that in the teaching diary, and make up for the class within that fortnightly period. There are also some deadlines which are to be followed for completing Internal Evaluations of projects/assignments etc - they have to be completed and evaluated prior to the final internal, so the student can get an idea of the marks she/he already has in that particular subject/lab. Finally, during the last week of classes, deadlines are announced by the Chief Proctor for the finalization of the Internal marks component ( 50 marks in theory/lab ), which is then "frozen" prior to the last day of the term.

File Description	Documents
Upload the Academic Calendar and Teaching Plans during the year	<a href="#">View File</a>

## 2.4 - Teacher Profile and Quality

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

383

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

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

285

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	<a href="#">View File</a>
Any additional information	No File Uploaded

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

16

File Description	Documents
List of teachers including their PAN, designation, Department and details of their experience	<a href="#">View File</a>
Any additional information	No File Uploaded

## 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

File Description	Documents
List of Programmes and the date of last semester-end / year-end examinations and the date of declaration of result	<a href="#">View File</a>
Any additional information	No File Uploaded

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

12

File Description	Documents
Upload the number of complaints and total number of students who appeared for exams during the year	<a href="#">View File</a>
Upload any additional information	No File Uploaded



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)

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 (SMS & hard copy of progress report) to parents by the proctor/mentor. Under graduate (Semester End Examination)-

1. The student registers for the examination online, with fee payment for the regular semester subjects and re-registered subjects.
2. The eligible students list satisfying the requirements of CIE marks and attendance is generated by the automation system.
3. The admission tickets are printed for the eligible students with details of student, list of subjects eligible and photograph.
4. The Valuation process:
  - a. Answer books are bar coded by automation system to keep the identity of the student confidential.
  - b. The allocation of 10 answer books for each packet is done by randomizing the allocation in the system.
  - c. The marks sheet is generated and printed based on the marks entered by the evaluator.
  - d. The system generates the list of answer books selected for the moderation based on Institution specifications.
  - e. The results are generated after completion of valuation process

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 by both internal and external evaluators
3. The marks entered by the evaluators are printed and marks sheet are submitted along with the packets
4. 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 in the evaluation process
- 2 Minimized manual data and marks entry at all levels of evaluation minimizes the mistakes
- 3 Processing of final evaluation with performance indicator concurrently.

4 Course attainments and other OBE analysis is carried out precisely and reports are generated to enhance the curriculum

- 5 Results are announced on institutional website and access is provided to students and parents
- 6 A digital repository with

backup contains data related to examination process and student performance throughout the course. 7 Digital storage enables quick document retrieval for the purpose of certifications and printing certificates. 8 Automation with tracking systems enhances credibility of examination process.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="http://msrit.edu/examination.html#exam-section">http://msrit.edu/examination.html#exam-section</a>

## 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 graduate acquired throughout the programme. POs are derived from the graduate attributes, which vary from UG to PG 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 MCA programmes. 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 vary from 3 to 6 depending the course content. COs are defined based on the Bloom's Taxonomy by the course coordinator. 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 which includes Vision, Mission, POs, PSOs and COs of various courses of the curriculum. Curriculum books The curriculum books are issued every year to all the students of the programme which includes Vision, Mission, POs, PSOs and COs of various courses. Classrooms Boards containing Vision, Mission, POs and PSOs are displayed in all the classrooms and laboratories. Vision, Mission, POs and PSOs are displayed in all the departmental notice boards Vision, Mission, POs and PSOs of programmes offered by the department are

displayed in the HOD's Chamber Vision, Mission, POs and PSOs of programmes offered by the department are displayed in the Faculty rooms Orientation program: Students of first year and their parents are made aware of Vision and Mission of the Institute, Department, Program Educational Objectives, outcome based education (OBE) and accreditation during the induction Program. Students and parents are also made aware of their roles and responsibilities in achieving vision of the Department. There are multiple ways through which the POs and PSOs are made public to the stakeholders; the primary one is publishing the POs and PSOs on the Departmental websites. For example:

<http://msrit.edu/department/biotechnology.html>

<http://msrit.edu/department/cse.html>

The Program Outcomes (POs) and Program Specific Outcomes (PSOs) for all the programs in the institute and the complete list of the Course Outcomes (COs) for all the courses offered by the institution is available in the link provided in "Link for Additional Information"

File Description	Documents
Upload COs for all courses (exemplars from the Glossary)	<a href="#">View File</a>
Upload any additional information	No File Uploaded
Link for additional Information	<a href="https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/11003_2.6.1+(3).xlsx">https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/11003_2.6.1+(3).xlsx</a>

## 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 which describes the competencies gained through the course. The POs and PSOs represent the competency gained through the programme. The mapping of COs to POs and PSOs 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. The Direct Assessment includes Continuous Internal Evaluation (CIE), Semester End Examination (SEE), project, seminar, quiz, case study, 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 end survey questions are framed by the course coordinator to find the attainment level of course. The weightage of components for CO attainment is 40% for CIE, 40% for SEE and 20% for indirect assessment. The course wise PO/PSO attainments are calculated based on the weightage assigned for the CO to PO/PSO mapping. The direct PO/PSO attainment from CO is calculated based on the number of courses mapped. The overall attainment of PO/PSO for the programme is calculated by assigning 80% weightage to the PO attainment through CO and 20% weightage to the indirect assessment methods such as through CO and 20% weightage to the indirect assessment methods such as alumni survey, employer survey and graduate survey. The surveys are designed on a scale of 5 by the programme assessment committee. The assessment of surveys is done by weighted average method. The attainment level of CO, PO and PSO are compared with target level set by the course coordinator and programme assessment committee. The analysis of the attainments is carried out by the Programme Assessment Committee. If the attainment level is below the target, the committee suggests possible modifications/improvements in the teaching-learning methodologies; assessment and curriculum changes. The detailed plan of action helps in further attainment of POs/PSOs. as alumni survey, employer survey and graduate survey. The surveys are designed on a scale of 5 by the programme assessment committee. The assessment of surveys is done by weighted average method. The attainment level of CO, PO and PSO are compared with target level set by the course coordinator and programme assessment committee. The analysis of the attainments is carried out by the Programme Assessment Committee. If the attainment level is below the target, the committee suggests possible modifications/improvements in the teaching-learning methodologies; assessment and curriculum changes. The detailed plan of action helps in further attainment of POs/PSOs.

PO attainment samples are available in additional information link.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/CO+PO+attainment.docx">https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/CO+PO+attainment.docx</a>

### 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

1222

File Description	Documents
Upload list of Programmes and number of students appear for and passed in the final year examinations	<a href="#">View File</a>
Upload any additional information	No File Uploaded
Paste link for the annual report	Nil

### 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+report+-+2021+\(18-09-2021\).pdf](https://msrit-bucket.s3.us-west-2.amazonaws.com/Uploads/Student+satisfaction+report+-+2021+(18-09-2021).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. The research policy is focused through six themes.

1. Establishing Centre of Excellences in thematic areas linked to industry
2. Establishing seed funding (up to Rs 5 lakhs) for faculty
3. Financial assistance to full time PhD scholars

4. Incentives for quality publications
5. Protecting the intellectual property created by faculty and students of MSRIT
6. Establishment of a R&D group with faculty from all engineering disciplines

#### Industry oriented R&D

To ensure that faculty research is linked to leading industries, two Centre of Excellences have already been established at MSRIT. The first is the Boeing Research and Technology Lab, which comprises of the following R&D labs: Instrumentation, Production Systems, Material, NDT-Non Destructive Testing and the Tear down Analysis Lab. The second is the Imaging Technology Solutions Lab in collaboration with IGCAR and Lucid s/w solutions. Two new Centers of Excellence are being established. The first is in collaboration with Boeing, in the area of Advanced Manufacturing. The second is the Centre for Cyber Physical Systems. The objectives of both the centers are to bring faculty from diverse backgrounds onto common platforms in order to foster interdisciplinary research and improve external funding/consultancy.

#### Seed Funding

Since October 2019 MSRIT, (Ref: Circular Number RIT/PRIN/2018-19/1596) provides seed funding up to Rs 5 lakhs to enable faculty to experiment with innovative ideas. The seed funding enables faculty to develop novel prototypes and algorithms. Based on this faculty are encouraged to apply for external funding to transition those innovative ideas from prototypes to product ready systems. Faculty must have a mentor from either IISc or any of the IITs or NITs.

#### Financial assistance to full time PhD scholars

MSRIT also provides support to full time Ph.D. scholars up to Rs 10,000 per month. WRITE MORE...

#### Incentives for quality publications

Since May 2017 MSRIT has started providing incentives to faculty who have published in quality journals. The quality metric is derived directly from Scimago. There are four categories in SJR rankings, Q1 to Q4. The incentives are proportional to the ranking of the specific publication as detailed below

Category

SJR ranking

Description

Incentive amount

A

Q1

Excellent

Rs. 25,000

B

Q2

Good

Rs. 10,000

C

Q3

Fair

Rs. 5,000

D

Q4

Acceptable

Rs. 2,000

The following are the norms to be followed for availing the incentives

1. Publication has all MSRIT authors:

1. If the publication has only faculty members as authors, the incentive amount will be divided equally among all MSRIT faculty members that are on the author list.

1. If the publication has student authors and one or more faculty authors, then:

1. The faculty member will be eligible for the full amount of the incentive, provided the first author is the faculty member, OR the first author is a student and the second author is the faculty member.
2. The faculty member will be eligible for only 50% of the incentive amount, if the first two authors are students, and the faculty member is the third author.
3. In all other cases, the faculty members are not eligible for the incentive.
4. In cases A2(a) and A2(b), if the publication has additional faculty members as authors (regardless of their position in the author list), the eligible incentive amount will be shared equally among them.

1. Publication has a combination of external and MSRIT authors:

1. If the publication does not have any (MSRIT or external) student authors:

1. MSRIT faculty member will be eligible for the full incentive amount if he/she is the first author.
2. The MSRIT faculty member will be eligible for 50% of the incentive amount if he/she is the second author, while the first author is external. The MSRIT faculty member will also be eligible for 50% of the incentive amount, if he/she is the third author, and the first two are external authors from two different institutions.

1. If the first three (or more) authors are external, then the MSRIT faculty member will not be eligible for any incentive.



1. In cases B1(a), B1(b), and B1(c), if the publication has additional MSRIT faculty members as authors (regardless of their position in the author list), the eligible incentive amount will be shared equally among them.

## Intellectual Property Policy

The Intellectual Property Policy (Ref No.: MSRIT/PRIN/2017/105) set by MSRIT sets a framework for the protection of all IPR generated at MSRIT. The key highlights from the IPR policy are described below

- "IP" Shall be matter that is the result and/or outcome of research, discovery, findings, creations, inventions, innovations, novel methods and /or processes evolved by employees of MSRIT. IP shall include written matter engendered in the course of the research or teaching-learning process by scholars, employees of MSRIT and visiting faculty.

- The IP generated must be of an original nature, amenable to patenting/copyrighting/trade marking/design registering and written matter of an original nature. The matter must be able to lend itself to definition in writing.

- Recognition of IP begins with the generator of any IP to register the fact of creation of IP with the Dean for Research (MSRIT). Applicants desiring to register their IP shall furnish a statement of creation that forms a fair description of their respective creation and a request to register. The application shall specify whether the IP is for patent/copyright/bio-diversity right reservation/design, layout confirmation/written composition for publication OR if the intention is to be a creation of proven novelty that confers status of first creation. applicant shall provide to the Dean for Research the actual item for a sealed cover that shall conform to the requirement of patenting/copyright. written or a process evolved also may be registered by providing a detailed description that will help establish future adoption or use without proper request or acknowledgement.

- The Registering applicant shall also furnish a certificate of creation / invention / discovery / authorship that explains the steps taken to establish the novelty and authenticity of the IP

registered.

- The preparation of the certificate of novelty and/or originality must furnish evidence of the diligence applied in the course of engendering the IP for registration, The claim to novelty/originality and action of first creation must be described.

- The person registering a claim shall declare all the names of persons who will share the credit for the IP registered.

- A group of not less than three nor exceeding five members shall be constituted by the Principal and Dean for Research to assess the creation being given in for IP registration shall decide on whether the creation is worthy of being accorded the status of IP and thus be registered for protection and future licensing.

- Upon the Principal and Dean for Research constituted committee deciding that an application being fit for registration, the IP shall be duly registered and the author/s be informed of the same.

- The MSRIT will, on the recommendation of the Principal and Dean for Research take steps to apply for the patenting/copyrighting/trademark registration of the matter registered. The cost of such action, up to 90% shall be borne by MSRIT.

#### FEATURES OF THE IP POLICY:

A: The MSRIT IP Policy shall apply to all employees, teachers, scholars& visiting faculty of MSRIT.

B: An unequivocal acceptance of the IP Policy needs to be given by every employee or student to abide by the rules of the Policy as amended from time to time.

C: Creators of IP who register their IP with MSRIT acknowledge that MSRIT will be the owner of the IP registered.

D: Upon registering any IP after signaling acceptance of the IP Policy, MSRIT shall have the right to apply for its protection in India or throughout the world or in specific countries, to be decided after consulting with the creator.

E: The cost of obtaining or providing the protection shall be borne by MSRIT up to the extent of 90% of the cost and 10% by the creator of the IP proposed for protection by way of patent, copyright, trademark or any other method not specified

F: MSRIT will help the creator of the IP registered to license the IP for use by external agencies depending on the nature of the innovation/invention to corporate entities only.

G: IP registered by the MSRIT gives MSRIT the right to access the IP for the sole purpose of academic work that will cover the entire gamut of the teaching-learning process and research

H: Revenues generated from licensing the IP generated and registered will be at the ratio of 70% to creator and 30% to MSRIT. The 70% will be divided among all members of the creator's team who have to be declared at the time of Registration.

I: Creators of registered IP are free to contact potential licensees' of the IP. However, it shall be the obligation of the creator to furnish all details of the transaction to MSRIT and involve the MSRIT in the negotiations. In the event of a contract being arrived at, all payment shall be made to MSRIT. The revenue generated shall be shared at 85% to the creators and 15% to MSRIT.

K: The Principal and Dean for Research shall be the primary arbiter of intellectual

dishonesty and the last level of appeal shall lie with the Chief Executive, GEF (Engg. &

GS), Any conflict of interest arising, the Chief Executive shall nominate a suitable arbitrator.

Establishment of a R&D group

Finally, MSRIT has established a Research Centre (Circular number: RIT/PRINT/2019/1919), with two coordinators (Dr. N Sriram and Dr. KRV Subramanian) and with 14 full time faculty identified to focus on research. The objectives of this research Centre is to promote research and consultancy at the institute level, to facilitate interaction with external agencies (industries, funding bodies etc.), to create multiple research thematic areas at MSRIT, and to significantly increase the number of quality publications/patents. The Committee also assists other faculty of MSRIT to write R&D

proposals. The dominant focus of this committee is to ensure that inter-disciplinary research can be conducted at MSRIT, the faculty in the committee are from all the engineering disciplines at MSRIT.

File Description	Documents
Upload the Minutes of the Governing Council/ Syndicate/Board of Management related to research promotion policy adoption	<a href="#">View File</a>
Provide URL of policy document on promotion of research uploaded on the website	<a href="http://igac.online/files/RamaiahInstituteofTechnology/1266/Policy/11003_MSRIT_researchpolicy.pdf">http://igac.online/files/RamaiahInstituteofTechnology/1266/Policy/11003_MSRIT_researchpolicy.pdf</a>
Any additional information	<a href="#">View File</a>

### 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)

26.64

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

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

0

File Description	Documents
e-copies of the award letters of the teachers	<a href="#">View File</a>
List of teachers and details of their international fellowship(s)	No File Uploaded
Any additional information	No File Uploaded

### 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)

217.21

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

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

11

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/Research+Grants.pdf">https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/Research+Grants.pdf</a>
List of research projects during the year	<a href="#">View File</a>

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

137

File Description	Documents
Upload copies of the letter of the university recognizing teachers as research guides	<a href="#">View File</a>
Institutional data in Prescribed format	<a href="#">View File</a>

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

7

File Description	Documents
Supporting document from Funding Agencies	<a href="#">View File</a>
Paste link to funding agencies' website	<a href="http://www.serb.gov.in/home.php">http://www.serb.gov.in/home.php</a> ; <a href="http://www.vgst.in/">http://www.vgst.in/</a>
Any additional information	<a href="#">View File</a>

### 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.

MSRiT has established 5 centres of excellence in the areas of Centre for Imaging Technologies (CIT), Centre for Advanced Materials Technology (CAMT), Centre for Cyber Physical Systems (CCPS), Centre for Antennas and Radio Frequency Systems (CARFS) and Schneider Centre of Excellence on Building Automation for providing skill enhancement training, to promote research culture and product development. All the labs are having state of art infrastructure with highly qualified faculties. More than 27 patents have been filed and published in 2020-21.

MSRIT has established Ramaih Evolute a Section 8 company in collaboration with MSRIT Entrepreneurship Cell. Entrepreneurship Development Cell basically aims at recognizing and developing soft skills of individuals. The training mainly focus on skillsets needed in Leadership & Entrepreneurship related domains and also focus on the training required for RIT students related to their academic, & Industry requirement. The main objective is to enable them in lifelong learning. E-Cell also actively incubates start-up

ideas by creating required eco system to be an entrepreneur. Entrepreneurial traits such as a leader, team player , a risk taker , excellent judge of opportunities and ability to recognize the market potential are important. With these objectives in mind E-Cell functions to guide the students of R.I.T towards a promising Entrepreneurial journey. Various activities are arranged under the wings of EDC cell. Flagship events as NATIONAL ENTREPRENEURSHIP NETWORK E-WEEK (NEN) week, EMPYREAL are held annually .The annual project exhibition "PRADARSHANA- open day event is one of the vibrant event on the campus to mention. Others include My story sessions, workshops on marketing, business ideas business proposal writing etc. The institute was awarded 8th RANK in 2020 -ARIIA (Atal Ranking of Institutions on Innovation Achievements an initiative of MoE, Govt. Of India in the category of Private or Self financed colleges/Institutes, which is an indicator related to "Innovation and Entrepreneurship Development" in higher educational Institutes (HEI).

Ramaiah Evolute has been established as section 8 company at R.I.T, to extend support system for start-up ecosystem and innovative entrepreneurship. It provides a strong mentoring team across various domains of engineering along with business and financial guidance for start-ups.

**Notable STARTUPS:**

- BIONALTEK ENTERPRISES PRIVATE LIMITED
- DROGHER TECHNOLOGIES PRIVATE LIMITED
- ADWINDOW
- PUPILMESH PRIVATE LIMITED
- STARYA MOBILITY PRIVATE LIMITED
- EDIMV PRIVATE LIMITED
- VIOSIP SOLUTIONS PRIVATE LIMITED
- SWACHHA ECO SOLUTIONS

StartUpsestablished in 2020-21

Ajgene Sciences/ Bionaltek Enterprises Pvt Ltd : Establishment year: 2020/2021

Founder/s: Arpitha Rachandraiah ,Abraham Samuel Finney ,Jude Stephan

Pre-incubated at the campus as Ajgene Sciences and now established as Bionaltek Enterprises Pvt Ltd, a health-tech start-up company registered in 2020 Incubated at EDC ,R.I.T and also has

established a product development in Bangalore Bio innovation Centre. This health-tech company focus is and involvement is in developing integrated diagnostics solutions for rural and economically backward people. Biology, biosensors, Analytics and HHS technologies are the forte of this company.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="https://www.ramaiah-evolute.com/about">https://www.ramaiah-evolute.com/about</a>

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

File Description	Documents
Report of the events	<a href="#">View File</a>
List of workshops/seminars conducted during the year	<a href="#">View File</a>
Any additional information	No File Uploaded

### 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	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

### 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**

65

File Description	Documents
URL to the research page on HEI website	<a href="http://msrit.edu/department/rnd.html">http://msrit.edu/department/rnd.html</a>
List of PhD scholars and details like name of the guide, title of thesis, and year of registration	<a href="#">View File</a>
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**

2

File Description	Documents
List of research papers by title, author, department, and year of publication	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

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

126

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="https://www.jotform.com/tables/210282384650452">https://www.jotform.com/tables/210282384650452</a> ; <a href="https://www.jotform.com/tables/203558405673459">https://www.jotform.com/tables/203558405673459</a>

**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**

349

File Description	Documents
Any additional information	<a href="#">View File</a>
Bibliometrics of the publications during the year	<a href="#">View File</a>

### 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

23

File Description	Documents
Bibliometrics of publications based on Scopus/ Web of Science - h-index of the Institution	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

### 3.5 - Consultancy

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

126.29938

File Description	Documents
Audited statements of accounts indicating the revenue generated through consultancy and corporate training	<a href="#">View File</a>
List of consultants and revenue generated by them	<a href="#">View File</a>
Any additional information	No File Uploaded

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

126.29938

File Description	Documents
Audited statements of accounts indicating the expenditure incurred on developing facilities and training teachers and staff for undertaking consultancy	<a href="#">View File</a>
List of training programmes, teachers and staff trained for undertaking consultancy	No File Uploaded
List of facilities and staff available for undertaking consultancy	No File Uploaded
Any additional information	<a href="#">View File</a>

### 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

The college organizes a number of extension activities to promote institute-neighborhood community to sensitize the students towards community needs. The students of our college actively participate in social service activities leading to their overall development. The college runs effectively National Service Scheme and National Cadet Corps Units. Through these units, the college undertakes various extension activities in the neighbourhood community. NSS organizes a residential seven day camp in nearby adopted village and several activities were carried out by NSS volunteers addressing social issues which include cleanliness , tree plantation ,water conservation through construction of Bandhara,road construction, Shramdan,Social interaction, Group discussion Eradication of superstition, Beti Bacho Beti Padhao, Environmental awareness, Women empowerment, National Integrity, Aids awareness, Blood donation camp, Health check up camp, Veterinary guidance ,Farmers meet, Awareness about farmer's suicide etc. The NCC unit of the college comes under 11MAh.BN.NCC Akola. It aims at developing qualities of leadership, patriotism, maintaining discipline, character building, spirit of adventure and the ideal of self service. The NCC unit of the college organizes various extension activities as tree plantation, Road safety awareness,Ekta daud for health, Save fuel save country programme,Swachhta Abhiyan ,National equality awareness. Other than NSS and NCC units, the various departments of the college is conscious about its responsibilities for shaping students into responsible citizens of the country by making students aware of

social issues through various programmes like Environmental Awareness, Personal Health and Hygiene, Diet awareness, Road Safety, Tree Plantation, Soil and Water Testing, Plastic eradication, No vehicle day, Jananisuraksha, Programme on female foeticide, organizing visit to Orphanages and Anganwadi, Voters awareness, Blood group detection, Health check -up camps, Blood donation camps, Dental checkup camp, etc. All these mentioned activities have positive impact on the students and it developed student community relationship, leadership skill and self confidence of students. It also helped in cultivating hidden personality of students and created awareness among students.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/img/reports/NSS.pdf">https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/img/reports/NSS.pdf</a>

### 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

134

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

### 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)

11

File Description	Documents
Reports of the events organized	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

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

1460

File Description	Documents
Reports of the events	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

### 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

7

File Description	Documents
Copies of documents highlighting collaboration	<a href="#">View File</a>
Any additional information	No File Uploaded

#### 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)

19

File Description	Documents
e-copies of the MoUs with institution/ industry/ corporate house	<a href="#">View File</a>
Details of functional MoUs with institutions of national, international importance, other institutions etc. during the year	<a href="#">View File</a>
Any additional information	No File Uploaded

## 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 120 classrooms, 103 laboratories, central library, 1 auditorium, 5 seminar halls, 4 board rooms,, 8 centres of excellence( )and

playground..The computing equipment (2,889) is more than adequate for the teachinglearning process. All the classrooms are equipped with Wi-fi and LCD. About 6 classrooms are equippedwith recording facility and used extensively for recording lectures. The total Internet Bandwidth availableis 1600 mbps. Effective utilization of infrastructure is ensured through appointment of adequate and well qualified lab technicians/system administrator. The available physical infrastructure is optimally utilizedbeyond regular college hours to conduct certificate courses, co-curricular activities/extra - curricular activities, proctor meetings, placement training classes, seminars, conferences, etc. Every department hasdedicated and adequate number of laboratories and classrooms as per VTU and AICTE norms. Each laboratory is equipped with sufficient number of required experimental setups. The Central library isequipped with a good number of reference books and journals. Every department has computer laboratories which are utilized for on-line examinations, aptitude tests, project work and competitions by students of alldepartments. All the classrooms, laboratories, seminar halls, auditorium, board rooms, library, workshop, fitness centre, canteen, etc., is housed in several blocks. The following Table gives the built up area of thevarious blocks.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	<a href="http://www.msrit.edu/support/sports.html">http://www.msrit.edu/support/sports.html</a>

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

The Department of Physical Education plays an important role in a student's life on campus. TheDepartment of Physical Education is headed by Physical Director and assisted by individual coaches forfootball, hockey, volleyball, cricket, basketball, etc. The Department aims to provide the students withwide range of sports recreation and leisure activities for students, staff and faculty. The main objective is toencourage the growth and development of students in secure environment in order to develop fitness, teambuilding and leadership opportunities. The college offers several facilities on campus to cater to thephysical development of students with provision for both indoor and outdoor games. M. S. Ramaiah Institute of Technology has made a name for itself in a variety of sports activities like - Basketball,Cricket, Tennis,

Yoga, Athletics, Taekwondo, Water Polo, Swimming, Hockey, Football, Throw Ball, Handball, Netball, Judo, Wrestling, Badminton, Chess, Carom and Table Tennis. In memory of our Founder Chairman Dr. M S Ramaiah, we organize Dr. M. S. Ramaiah Memorial State Level Inter Engineering Colleges Cricket and Basketball (M & W) tournaments every year. 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. Cash incentives are provided for outstanding performance in sports. The fitness centre is well equipped with a multi-gym, a range of free weights and aerobic equipment. A fitness instructor is available to train the staff and students of MSRIT. The fitness centre is equipped with all equipment needed for building strength, burning fat, improving general fitness, or for specific sports conditioning. The fitness centre is open to all faculty, staff and students of MSRIT. The fitness centre is maintained by the Department of Physical Education.

#### Cultural Activities:

MSRIT strongly believes in the holistic development of students, i.e., they should evolve into full-fledged and confident professionals by the time they graduate. 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. The Institute acknowledges the importance of cultural activities in the overall development of the students and 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. The college encourages students to take part in cultural activities at intra and inter-collegiate, regional, state and national levels. Students of this institution have won many awards adding to the prestige of the Institution. Every year M. S. Ramaiah Institute of Technology organizes UDBHAV, one of the best college cultural fests of South India. It offers a platform for showcasing the limitless talent of students from all across the state and country. It is also a blooming hub for cultural activities such as dance, music, theatre and literary events.

File Description	Documents
Geotagged pictures	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://www.msrit.edu/support/deca.html">http://www.msrit.edu/support/deca.html</a>

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

131

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

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

2456.80500

File Description	Documents
Upload audited utilization statements	<a href="#">View File</a>
Details of Expenditure, excluding salary, during the years	<a href="#">View File</a>
Any additional information	No File Uploaded

## 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 carpet area of 40350 Sqft having state of art infrastructure facilities with centralized air conditioning system and the 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 (Taylor & Francis-CRC Netbase , Springer Link, Packt Publications, New Age International, McGrawhill Education) with perpetual access



and 9,115 EBSCO Management e-Book subscription package, 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 (IEEE Journals, Standards and Conf. Proceedings), Taylor & Francis, Springer, Emerald (Mgmt) packages through VTU e-Library Consortium and EBSCO. In addition, there are 4404 CD's & DVD's and 75 Video Cassettes.
- The Library resources have been completely Bar Coded and automated using LIBSYS 7 (Rel.3) - Integrated Library Package, which helps in Transactions, OPAC (Online Public Access of Catalogues) and reservation of Books, etc., for the users. Library provides a Technology Platform and Database of Plagiarism Checking Tool "Turnitin Web Tool", SCOPUS Database and "NetAnalytikis-Sententia" to support R & D activities of students and faculty.
- Digital Libraries that are setup in both Library and Information Centre-1 (ESB Block-1) and Library and Information Centre-2 (LHC Block-1) libraries are well facilitated with 132 high end configured TFT Monitors computer systems that are connected to high bandwidth with speed of 400Mbps. The Faculty publications, Project Reports, Question Papers are uploaded on to the Digital Library server using DSpace Software, which is accessible within the campus covering 3,456 documents.
- Remote access to e-resources has been facilitated by library through the services of KNIMBUS Digital Library Platform with Remote Access Solution. In order to promote e-learning, the library has purchased "Local G", video content management software and hosts around 23,000 NPTEL courses on local server that are being streamed across the campus 24 x 7 uninterruptedly.
- Name of the ILMS software: LIBSYS (INTEGRATED LIBRARY MANAGEMENT SOFTWARE)
- Nature of automation (fully or partially) : Fully
- Version: 7 (RELEASE 3.0)
- Year of automation: 2007
- Name of the Digital Library Software: DSpace on UBUNTU OS
- Remote Access: Knimbus Federated Search Engine
- Anti Plagiarism: Turnitin Web Tool
- Standards: BSB, BIS Standards
- Database: SCOPUS
- National Digital Library
- Swayam
- Grammar Checker: NetAnalytikis-Sententia

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://msrit.edu/facilities/library.html">http://msrit.edu/facilities/library.html</a>

**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	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>

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

**40.35738**

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

**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**

**1177**

File Description	Documents
Upload details of library usage by teachers and students	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

### 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 computersystems/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 Wi-Fi enabled (with 200 access points) with internet speed of 1000 Mbps. A separate leased line internet connection of 600 Mbps is utilized for the wired network within the campus. This ensures the availability of high speed internet in both wired and wireless networks. The traffic through these networks is filtered through the firewall (Sophos Xg), which prevents any malicious/unwanted content from entering the network.

Year 2020-2021 Leased Line 600 MBPS Wi-Fi 1000 MBPS Total  
Bandwidth 1600 MBPS Number of computers available 3600

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. The institutional repository is hosted in house. The campus intranet has paved way to provide seamless access to the same. The institute also has a data information centre, which houses the data related to the

institution. The Institute has 24/7 IPbased surveillance system with 267 cameras, which cover the entire stretch of the institute. The recordings is kept in the database for 25 days. The Student Information System is an online database of students' academic performance, which the ward/parents/guardians can access through the internet to monitor the academic performance.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://www.msrit.edu/facilities/internet.html">http://www.msrit.edu/facilities/internet.html</a>

#### 4.3.2 - Student - Computer ratio

Number of Students	Number of Computers
6046	3605

File Description	Documents
Upload any additional information	<a href="#">View File</a>

#### 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	<a href="#">View File</a>
Upload any additional information	No File Uploaded

#### 4.3.4 - Institution has facilities for e-content development:

A. All four of the above

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	<a href="#">View File</a>
Paste link for additional information	<a href="http://igac.online/files/RamaiahInstituteofTechnology/1266/IT-facilities/11003_4.3.4_Impartus%20Screen%20shots.pdf">http://igac.online/files/RamaiahInstituteofTechnology/1266/IT-facilities/11003_4.3.4_Impartus%20Screen%20shots.pdf</a>
List of facilities for e-content development (Data Template)	<a href="#">View File</a>

#### 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)

1568.60925

File Description	Documents
Audited statements of accounts	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>

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 consists of one chief engineer and one electrical engineer supported by two electricians and two carpenters who maintain the physical infrastructure of the institute including minor day to day carpentry and electrical works in labs and classrooms. DG is maintained by the electrical engineer. Classrooms and other built up area are maintained for their day to day cleanliness by outsourced housekeeping staff. Housekeeping is outsourced to MJ Enterprises and they have employed 59 housekeepers and 3 supervisors who report to Maintenance Department. Air conditioning and lift maintenance is taken care by AMC. Potable water supply The water source for MSRIT are bore wells. The ground water is tapped and is used for domestic purposes. A portion of borewell water is treated in R.O system and distributed to students for drinking purposes. The R.O system delivers 400 L/hr. Rain water Harvesting: M.S. Ramaiah Institute of Technology has 6 blocks having five levels and large open roof area where provision has been made to harvest rain water. Each block in MSRIT has sufficient roof area and the rainwater is estimated taking concrete as impervious

layer. The open area also contributes rain water taking seepage factor. Each block has rain water harvesting tank and the collected rain water is used for gardening purposes. Whenever excess rainfall occurs, the overflow from the rain water harvesting tank is directed to infiltration wells which are very near to the bore wells. The rain water gets infiltrated into the ground and recharges the bore wells. Waste water treatment: M. S. Ramaiah Institute of Technology has waste water treatment plant, with a capacity to treat 2.5 lakh litres of waste water per day using SBR technology. The treated waste water, which conforms to the pollution control board standards is reused for flushing in toilets and for gardening purposes after disinfection. The treated sewage is also used to recharge the bore wells using infiltration wells.

Parking arrangement in MSRIT: The Institution provides four wheeler and two wheeler parking facility for the staff and students. Four wheeler parking facility is available in Basement -1 (Area-19,500 sft) of Multipurpose Block with a parking capacity is 70 Cars. Two wheeler parking facility is available in Basement-2 (Area 3500 sqft) of Multipurpose Block capacity-1000; Basement-2 (Area 3500 sqft) - capacity 200; Fitness Centre Block (Area 3500 sqft) - Capacity -200; Basement-1 - capacity - 200; Freshers Block Basement-1 - capacity-200.

Solid waste disposal: The solid waste generated inside the institution premises is segregated at the source itself by providing colour coded bins. Wet waste is directly disposed to BBMP lorries. The dry waste consisting plastics and papers are disposed to scrap vendors for recycling. e-waste disposal: The e - waste generated from electronics laboratories, computer science laboratories mechanical and electrical laboratories are stored scientifically in each department. At the end of each semester the authorized vendor approved by KSPCB or the material supplier is allowed to take the e-waste for treatment, recycle and disposal. Chemical Waste Treatment: The chemical waste water from laboratories are being treated separately in effluent treatment plant (ETP). The ETP has neutralisation, settling and filtration tanks. The treated water is mixed with domestic sewage. Electric Power Backup: Solar panels are installed at MSRIT campus with capacity of 431kWp. The power generation per day is about 2000kWh. This caters to the 47% electric power needs of the Institute. In addition, 2 generators of 500 kVA capacity are available in case of power failure. Budget: The Equipment, instruments, infrastructure and other facilities require a continuous maintenance and repair. Every year, sufficient funds are allocated towards Maintenance

**fund. Maintenance of Infrastructure:** The infrastructure maintenance is done by Maintenance Department as and when required.

**Equipment:** All Major/advanced equipment are maintained by Annual Maintenance Contract (AMC). Minor Equipment's are repaired and maintained regularly. ICT tools The entire campus is Wi-Fi enabled (with 200 access points) with internet speed of 600 Mbps. A separate leased line internet connection of 400 Mbps is utilized for the wired network within the campus. This ensures the availability of high speed internet of 1000Mbps wired and wireless networks. **Library:** The Library consist of books, journals, Library Software (LIBSYS), e-journals, e-books, etc. The books and journals are bounded. The stock verification is done as a part of regular maintenance. Central library works from 08 AM to 11.00 PM. The library has Online Public Access Catalogue (OPAC) for easy search of books for the benefit of students and staff.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://iqac.online/files/RamaiahInstituteofTechnology/1266/Green%20Initiatives/11003_rain-water-harvesting-caption.pdf">http://iqac.online/files/RamaiahInstituteofTechnology/1266/Green%20Initiatives/11003_rain-water-harvesting-caption.pdf</a>

## 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

**1194**

File Description	Documents
Upload self-attested letters with the list of students receiving scholarships	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>

#### 5.1.2 - Number of students benefitted by scholarships and freeships provided by the

**institution and non-government agencies during the year**

60

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Institutional data in prescribed format	<a href="#">View File</a>

**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**

A. All of the above

File Description	Documents
Link to Institutional website	<a href="http://www.msrit.edu/">http://www.msrit.edu/</a>
Details of capability development and schemes	<a href="#">View File</a>
Any additional information	No File Uploaded

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

872

File Description	Documents
Any additional information	No File Uploaded
Number of students benefitted by guidance for competitive examinations and career counseling during the year (Data Template)	<a href="#">View File</a>

**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**

A. All of the above



**with zero tolerance Mechanism for submission of online/offline students' grievances Timely redressal of grievances through appropriate committees**

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

## 5.2 - Student Progression

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

1011

File Description	Documents
Self-attested list of students placed	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>

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

245

File Description	Documents
Upload supporting data for students/alumni	<a href="#">View File</a>
Details of students who went for higher education	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

### 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**

158

File Description	Documents
Upload supporting data for students/alumni	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

**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**

91

File Description	Documents
e-copies of award letters and certificates	<a href="#">View File</a>
Any additional information	No File Uploaded

**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, student members are invited for the IQAC meeting. The students participate 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	No File Uploaded
Paste link for additional information	<a href="http://msrit.edu/">http://msrit.edu/</a>

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

1

File Description	Documents
Report of the event	<a href="#">View File</a>
List of sports and cultural events / competitions organised per year	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>

## 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 relationship among alumni, students, staff and management. There is a separate alumni portal ([www.msritalumni.com](http://www.msritalumni.com)) where alumni can interact through sharing information, messages, pictures, posting jobs etc. The portal also shares news of the activities in the institute. The portal has more than 14500 members and is mobile compatible with app Vaave available at Google Play store. Its chapters at Andhra Pradesh, Chennai, Cochin, Patna, Orissa and Dubai are organizing activities to bring MSRITians in their region closer. Current activities of the association are Scholarships to students: The association initiated Merit and Means scholarships, Shri Krishna P Godasi and GMW Aspire Foundation scholarships to support financially weaker and meritorious students Merit and Means Scholarship 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/. Every year about 40 to 50 students are awarded this scholarship. Shri Krishna P Godasi Scholarship -Shri Krishna P. Godasi Scholarship is instituted in the memory of Late Shri Krishna P. Godasi an alumnus by Soma Enterprises, to the students in any branch of engineering or architecture at M.S. Ramaiah Institute of Technology. The objective of this Scholarship is to grant full tuition fee for the entire B.E. / B.Arch course provided the students who meet the required criteria. Each year about 1011 lakhs are awarded to 2030 students. GMW Aspire foundation Scholarship MSRIT Alumni Association provides Scholarship of Rs.1,00,000.00 (Rs. One Lakh Only) through GMW Aspire Foundation which is an initiative by our distinguished alumni Sri Jasbir Singh. Project Funding: This scheme was initiated to motivate our budding engineers to get into some good projects, by providing some financial assistance by the association. MSRIT AA funds an amount of Rs. 1.3 to 1.5 Lakh every year towards UG PG Student Projects. Awards Distinguished Alumni award Eminent alumni who are at the pinnacles of organization and have significantly contributed to the nation, to the society are recognized during annual alumni meet. Gold Medals Alumni have instituted gold medals in most of the departments. First rank holders are awarded these gold medals during graduation day ceremony. Best Projects: Best Projects in both undergraduate and post graduates are awarded every year during farewell function. The award comprises of a trophy and a citation to each group member. Research Fellowship Scheme: MSRIT Alumni Association has instituted a research fellowship scheme for faculty doing quality research. This comprises of a monthly fellowship of Rs 5000/ and a contingency grant of Rs 10000/ annually. Bus Pass: Every year about 4050 deserving students are provided grant for bus pass facility. Library: The association has provided a book bank facility at institutes' library. Distinguished Alumni Talk Series: Distinguished Alumni Talk series was initiated as per the suggestions of Governing Body. Thirteen talks under this series has been delivered by eminent alumni.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="https://www.msritalumni.com/">https://www.msritalumni.com/</a>

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

A. ? 15 Lakhs

File Description	Documents
Upload any additional information	<a href="#">View File</a>

## 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, techno-entrepreneurial 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) of the institution. The GB constitutes the Directors of the Institution, eminent academicians, renowned industrialists, the Principal and few senior faculties. The GB meets twice a year and reviews the progress/growth of the institution. 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 reviews the implementation of the suggestions made, based on the activities conducted the targets and action plan will be revised to fulfil the Vision and Mission of the Institution.

The institution has well defined organizational structure, in which many senior faculties are the members of various Decision

making committees such as Governing body, Academic Council, Finance committee, Grievance committees and others to implement monitor academic/administrative matters of the institution.

Participation of teachers in the decision making bodies of the institution

Governing Body: Principal, Vice-Principal, Registrar(Academic), Controller of Examinations and onemore senior faculty are the members

Academic Council: Principal, Vice-Principal, Registrar(Academic), Controller of Examinations, AllHeads of the Departments and two more senior faculty are members

Finance Committee: Principal, Vice-Principal, Registrar (Academic) and two senior faculty are members

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="http://msrit.edu/gov-others.html">http://msrit.edu/gov-others.html</a>

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

M S Ramaiah Institute of Technology practice a culture of participative management, by involving facultymembers in a number of administrative roles in various academic and non-academic committees such asGoverning body, Academic Council, Finance committee, Sports committee, Board of Studies, Board ofExaminers, Welfare Association and many other decision making committees of the Institute. The Institutehas established a decentralized structure for decision making where various committees interface theirdecisions with Institute committees.

Decentralization of Administrative/Academic Powers:

The institution involves the faculty in various decision making bodies and committees to ensure smoothand systematic functioning of the institute. The Principal leads the academic and administrative process inthe institution. There are various people to help Principal in academic and administrative activitiesincluding Vice-Principal, Registrar Academic, Registrar

Administration, Registrar Admission, Controller of Examination and Heads of the Department.

Some of the senior faculty are members in various decision making bodies and committees such as Governing Body, Academic Council, Board of Studies, R&D committee, IQAC, etc. These committees meet time to time and ensure that the academic and administrative activities are conducted in a smooth, transparent and systematic way.

Each department has Board of Studies and Board of Examiners to ensure smooth conduction of academic activities. These two boards comprise faculty as internal members and Head of the Department as the Chairman. Eminent academicians/industry experts as external members. The Controller of Examination stakes care of the complete Autonomous examination process in a transparent and systematic way.

The curriculum framed in the departments is ratified by BoS is submitted to the Academic Council for approval. The decisions of Academic Council are endorsed by the Governing Body.

#### Delegation of Financial Powers:

Chief Executive and Chief of Finance lead the finance process. The Finance Committee helps in executing the financial activities. Finance committee comprises of CE, CoF, Principal and few senior faculty. The Finance Committee allocates budget to each department in discussion with the department heads. The financial planning by the committee is appraised to the Governing Body for approval. Keeping the strategic plan of the institution in view the Governing Body discusses the budgets proposed by each department and approves the required financial budget.

All HODs are financially permitted to spend expenditures as approved in their annual budget; in addition to this, the HoDs are permitted to take financial decisions up to Rs. 5.00 Lakh per annum for the department day-to-day expenditure.

The Principal of the institute is financially permitted to utilise up to Rs.25.00 Lakh per annum for the day-to-day academic/administrative activities in the institution. The Principal is given the leverage to expend as required considering the interest of Institution.

File Description	Documents
Upload strategic plan and deployment documents on the website	<a href="#">View File</a>
Upload any additional information	No File Uploaded
Paste link for additional Information	<a href="http://msrit.edu/">http://msrit.edu/</a>

## 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 2014-19 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 plan explicitly recognizes the need for changes in teaching learning process, research and development, skill development programs and entrepreneurship that are necessary for the growth of institution.

The strategic plan is prepared keeping the Vision and Mission of the institute. All departments prepare a strategic plan for the department. A committee is constituted to scrutinize the department strategic plans and drafts the strategic plan for the institute to align with the Vision and Mission. The Strategic Plan Committee comprises the senior faculty of the institution. The draft strategic plan is discussed with the Principal for further improvements, if any. The draft strategic plan is improved with the astute review by two external members of the Governing Body. And finally it is approved by the Governing Body.

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. The faculty publication increased from 0.23 per faculty per year to 0.46 per faculty per year in 4 years. Total number of funded research projects received is 65 and the total funding received 10.5 crores in the last 5 years. Full time research scholars increased from 2 to 42. The total number of Ph.D awarded was 108 in last 5 years. Faculty with Ph. D qualification increased from 54 to 185. Many students are taking up internships abroad. Two 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 (up to 5 lakhs) to initiate in-house research. The faculty are encouraged to publish papers in quality journals and are given incentives of up to Rs. 25000 from the year 2017. Incentives are decided based on the Q Ranking of the journal based on SJR (Scimago Journal Ranking), based on Q1, Q2, Q3 and Q4 ranking. The quality publications in indexed journals is improved by 30% in last three years. MSRIT is recognized as a Quality Improvement Programme Centre from AICTE to pursue Ph. D. MSRIT has introduced awards for Excellence in Teaching and Excellence in Research.

File Description	Documents
Strategic Plan and deployment documents on the website	<a href="#">View File</a>
Paste link for additional information	<a href="http://msrit.edu/">http://msrit.edu/</a>
Upload any additional information	No File Uploaded

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.

Institution has well defined organization structure and roles and responsibilities. The institution has well defined rules for effective governance in Administration and Academic activities, Institute has formed various committees.

**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
- Performs such other functions and institute committees, as may be necessary and deemed fit for the proper development, and fulfil the objectives for which the college has been declared as autonomous

#### Functions of Academic Council:

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. The Academic Council differs on any proposal, it will have the right to return the matter for reconsideration to the Board of Studies concerned or reject it, after giving relevant reasons to do so. Make regulations for sports, extra-curricular activities and proper maintenance and functioning of the playgrounds and hostels. Recommends to the Governing Body, proposals for institution of new programmes of study. Recommend to the Governing Body institution of scholarships, studentships, fellowships, prizes and medals and to frame regulations for the award of the same. Advises the Governing Body regarding academic affairs. Perform such other functions as may be assigned by the Governing Body.

#### Functions of Finance Committee:

Finance Committee normally meets once a year. To prepare Budget for the Institute and also Autonomous Examinations. To arrange audit of accounts

#### Recruitment:

Head of the Departments will submit requirement for faculty to the Principal. For recruitment, an advertisement is given in the leading newspapers. Eligible candidates are called for interview short listed by the department. Selection committee comprises VTU nominee, subject experts from outside the Institute, Head of the Department, Principal, Registrar (Academic) and Management Representative.

#### Promotional Policies:

Normally once in year, Management considers applications from such

of those staff members who have improved their qualifications (for example obtained Ph. D) and promotes them if they satisfy all the criteria stipulated by AICTE.

Institute has separate grievance redressal cell where Faculty, Students and Parents can register and become member of the grievance redressal cell.

A committee has been constituted for grievances. Committee comprises of Principal, Vice Principal, Registrar (Administration), Registrar (Academic) and few senior faculty of the institution. In addition, there are committees such as,

- Anti-Ragging Committee
- Hostel Committee.
- Women Grievance Redressal Committee and
- SC/ST and Minority Students Redressal Committee.

Online grievance can be submitted by logging into <http://www.msrit.edugrievance.com> Also they can mail the grievances to [grievances@msrit.edu](mailto:grievances@msrit.edu) Through the portal Faculty, Students, Parents, Non-teaching staff can submit their grievances. The submitted grievances will be addressed by the committee and forward the same to the management for necessary action.

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

**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	<a href="#">View File</a>
Screen shots of user interfaces	<a href="#">View File</a>
Details of implementation of e-governance in areas of operation	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

### 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 intechanical 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 non-teaching staff in the last yearis
- Amount spent on medical insurance for students in the last yearis Rs.

6..Medical expenses other than health insurance policy is provided for the staff and their familymembers who are treated in M. S. Ramaiah Hospitals to the maximum amount of Rs. 1,00,000/- peryear 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	<a href="#">View File</a>
Paste link for additional information	<a href="https://www.starhealth.in/">https://www.starhealth.in/</a>

**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**

22

File Description	Documents
Upload any additional information	No File Uploaded
Details of teachers provided with financial support to attend conference, workshops etc during the year (Data Template)	<a href="#">View File</a>

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

53

File Description	Documents
Reports of the Human Resource Development Centres (UGC HRDC/ASC or other relevant centres)	<a href="#">View File</a>
Upload any additional information	No File Uploaded

**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.)**

283

File Description	Documents
Summary of the IQAC report	<a href="#">View File</a>
Reports of the Human Resource Development Centres (UGC ASC or other relevant centers)	<a href="#">View File</a>
Upload any additional information	No File Uploaded

## 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., Chartered 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	<a href="#">View File</a>
Paste link for additional information	<a href="https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/Statement+of+Accounts+(2020-21).pdf">https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/Statement+of+Accounts+(2020-21).pdf</a>

#### 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)

447.06489

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

#### 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. The institute is a beneficiary of TEQIP-I and TEQIP-II and has received a total of Rs. 17.94 crores towards Institutional development and training needs. 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. The details of mobilisation of funds are as shown below.

#### M.S RAMAIAH INSTITUTE OF TECHNOLOGY

#### INCOME AND EXPENDITURE ACCOUNT

Income Year 2020-2021

Sl.No	Particulars	Amount in Rs.
1	Fee Collection	1,10,92,71,208
2	Interest Income	17,11,96,808
3	Other Receipts	3,51,47,586
Total - A		1,31,56,15,602

The major part of the expenditure is spent on salaries and other benefits for teaching and non-teaching staff. The various expenditures of the institution are planned by taking input from

departments and sectionheads. 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 cheques and balances are made for the expenditure and optimal utilization for the resources. The resources for scholarships are generated through government and non-government organizations. Alumni association generates its resources through contribution of Alumni and distributes the same for merit and mean scholarships, bus pass grant, mid-day meal scheme, project funding for UG and PG students and research funding for faculty.

Recurrring Expenditure Sl.No Particulars Year 2020-21 Amount in Rs. 1 Recurring Expenditure 75,57,21,847 2 Capital Expenditure 8,76,79,938

#### Income through Funded Research Projects and Consultancy

- No of External Funded Research Projects Undertaken -
  - Amount -Rs.217.21 Lakhs
- No of Consultancy Projects-
  - Amount Generated - Rs.126.29938 Lakhs

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/Statement+of+Accounts+(2020-21).pdf">https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/Statement+of+Accounts+(2020-21).pdf</a>

## 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 being innovative and reputed higher education institution, has mechanisms for academic auditing and adopted quality management strategies in all academic and administrative aspects. The institution has an Internal Quality Assurance cell (IQAC) 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 in the strategic plan are also covered for their attainment. 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. The audit comprises the following aspects,

- Teaching & Learning
- Result Analysis
- Attainment of course outcomes and programme outcomes
- Industry participation
- Workshops/FDPs/Seminars/Conferences conducted/Attended
- Research, consultancy and quality publications
- Department budget utilization

**Internal Audits:** IQAC conducts regular internal audits. There are around 40 senior faculty identified as IQAC auditors. During semester end, there will be an audit by internal auditors. The teaching and non-teaching departments and administrative offices are inspected on various quality measures defined by the IQAC. If there is any deviation in the quality objectives the auditors record in the audit report and the same is discussed with the Principal in the closing meeting of the audit. Based on the audit report the departments are suggested for improvements, if required.

**External Audits:** Further to strengthen the quality system, since 2013 Academic Audits by external agencies have also been initiated. Once in two years external academic audit is conducted. The details of the external audits are provided in the additional

information.

## 2. Pedagogy and Skill Upgradation Trainings

IQAC initiates the Pedagogy training programmes for the faculty. Since 2013 Pedagogy trainings are initiated by IQAC and all the faculty are trained in Outcome Based Education and assessment. From time to time, the newly recruited faculty are trained in Pedagogy. For skill up gradation of the faculty, Workshops/ FDPs/ Seminars/ Conferences are initiated by the IQAC. Every department is mandated to organize the professional development programmes during the vacation. The teaching and non-teaching faculty are encouraged to attend professional development programmes inside and outside the institution.

Apart from these IQAC initiates NBA and NAAC accreditation processes, Institute regularly participates in national ranking processes such as NIRF, India Today, Outlook Surveys, etc.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://naac.msrit.edu/">http://naac.msrit.edu/</a>

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

### 1. 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, which contains both Direct and Indirect Assessment Methods. The attainment levels of COs and POs are compared with target values and analysed for their attainment. The scope for further improvement will be recorded based on feedback of the faculty and students by the Programme assessment Committee (PAC). The recommendations of PAC are considered for the curriculum revision and to improve teaching learning methodologies. The attainments of all the COs and POs of UG and PG programmes are audited by IQAC. Outcome Based Education (OBE) is an initiation by IQAC to reform

the teaching and learning process in the institution. To inculcate self-learning capabilities, IQAC encourages online certification courses such as NPTEL/Swayam, Coursera, etc. 2. 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, industry internship for the students for a period 3 to 4 weeks has been made mandatory. Around 90% of UG and PG students are undergone for internships in reputed industries related to their field of study. Many students from IT branches are selected for internships with stipend.

Internships are helpful in better understanding of the courses learnt, carrying out projects and solving real time problems. Curriculum design: As per IQAC procedures, Curriculum is designed by taking the feedback from the industry. Academic Council, Board of Studies and Department Advisory Boards have 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 partial delivery of the courses, Faculty development Programmes, Workshops, Seminars and Technical Talks.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	<a href="http://naac.msrit.edu/IQAC/index.html">http://naac.msrit.edu/IQAC/index.html</a>

**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	<a href="http://www.msrit-igac.com/Reports.html">http://www.msrit-igac.com/Reports.html</a>
Upload e-copies of accreditations and certification	<a href="#">View File</a>
Upload details of quality assurance initiatives of the institution	<a href="#">View File</a>
Upload any additional information	No File Uploaded

## 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 of 2014-2021. At Ramaiah, we understand the importance of promoting equity and social awareness in not only our student body and staff, but the wider community as a whole. 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. We also conduct a range of events where students can develop their technical or extracurricular skills. Ramaiah's proud sporting pedigree stems from events like the M S Ramaiah Memorial State Level Inter Colleges Basketball Tournament (2018), where both men and women can compete with the best teams from the state. We conduct Sports Day events which provide equitable opportunities for all students to showcase their talent, such as Sports for Women (April 2019). To aid with medical awareness and best health practices, we have conducted several awareness programs, especially for women. From a cancer awareness program in 2014 to a breast cancer orientation and screening program in 2019, we seek to address the fast-growing

issue of cancer, and stress on the importance of prompt diagnosis. We have also taken strides towards menstrual hygiene, including Green the Red, a program in 2017 on sustainable menstrual hygiene practices and management solutions. Apart from this, our students actively participate in an annual blood donation drive for several notable blood banks in Bengaluru. Many of our outreach programs to the local community are aimed at empowering women, and we focus on giving them the skills needed in a modern setting. We have conducted several community programs, including free computer training for underprivileged women (2016-17) and the IEEE Women in Engineering - Technology Development and Community Outreach program in March 2019. We also have several outreach programs to farmers in the local community, such as Knowledge Sharing programs from 2016-2018, and educating them through workshops such as Raitha Sambruddhi (2016), which involved interactions with more than 200 farmers at Bheemasandra, and Zero-budget programs on Rain Water Harvesting (2017) and Natural Farming (2018). Our proximity to some of the best academic institutions and industry facilitates collaboration for social welfare. We have worked with the M S Ramaiah Hospital to analyze medical data for better health practices. Some companies that come for campus placements offer positions exclusively for women, to encourage female participation in the technology industry. We also celebrate occasions like Independence Day and Engineer's day with programs intended to promote equity and harmony among all. Continuing with our work from 2014-2021, 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	<a href="#">View File</a>
Paste link for additional Information	Nil

**7.1.2 - The Institution has facilities for alternate sources of energy and energy conservation: Solar energy plant Wheeling to the Grid power-efficient equipment**

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

File Description	Documents
Geotagged Photographs	<a href="#">View File</a>
Any other relevant information	<a href="#">View File</a>

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 purpose.

**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 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	<a href="#">View File</a>
Geotagged photographs of the facilities	<a href="#">View File</a>
Any other relevant information	No File Uploaded

**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

A. Any 4 or all of the above

File Description	Documents
Geotagged photographs / videos of the facilities	<a href="#">View File</a>
Any other relevant information	No File Uploaded

### 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	<a href="#">View File</a>
Various policy documents / decisions circulated for implementation	<a href="#">View File</a>
Any other relevant documents	<a href="#">View File</a>

### 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	<a href="#">View File</a>
Certification by the auditing agency	<a href="#">View File</a>
Certificates of the awards received	No File Uploaded
Any other relevant information	No File Uploaded

**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	<a href="#">View File</a>
Policy documents and brochures on the support to be provided	<a href="#">View File</a>
Details of the software procured for providing assistance	No File Uploaded
Any other relevant information	<a href="#">View File</a>

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.

Activity Date Number of participants  
 Independence Day 15-08-2020 150  
 Engineers Day 15-09-2020 120  
 Republic day 26-01-2021 250  
 Womens Day 08-03-2021 250  
 Karnataka Formation Day 07-11-2020 100  
 Teachers Day 05-09-2020 360

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

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

India, as a country, includes individuals with different backgrounds viz., cultural, social, economic, linguistic, and ethnic diversities governed and guided by the Constitution irrespective of caste, religion, race sex.

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 as a responsible citizen.

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. These elements are inculcated in the value system of the college community.

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. Code of conduct is prepared for students and staff and everyone should obey the conduct rules. The affiliating University curriculum is framed with mandatory courses like Professional ethics and human values, Constitution of India, Essence of Indian Traditional Knowledge, as a small step to inculcate constitutional obligations among the students. 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. Ethical Values, rights, duties, and responsibilities of citizens are some of the topics that are enlisted in Elocution, debates, and class presentation.

File Description	Documents
Details of activities that inculcate values necessary to transform students into responsible citizens	<a href="#">View File</a>
Any other relevant information	No File Uploaded

**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	<a href="#">View File</a>
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	<a href="#">View File</a>
Any other relevant information	<a href="#">View File</a>

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 the great Indian personalities. These National festivals are celebrated to make the students aware about 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	<a href="#">View File</a>
Geotagged photographs of some of the events	<a href="#">View File</a>
Any other relevant information	No File Uploaded

## 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

**Title of the Practice** a. Implement outcome based education in Undergraduate and postgraduate programs b. Research promotional policy to improve RD Activities, Ranking and Accreditation 2  
**Objectives of the Practice** a. Effective Implementation of outcome

based education for improving graduate attributes and to get accreditation from National Board of Accreditation Change of accreditation from output put model to Outcome model was a major challenge to change our teaching learning, assessment methodology and enhancement of outreach activities b. Enhancing the research publications in peer reviewed journals and conference to improve Research and Consultancy component in NIRF Ranking Sudden changes in accreditation procedures, introduction of ranking system such as NIRF and QS Ranking has imposed as great challenge to improve research culture in the Institution 3 The Context a. M S Ramaiah Institute Technology is 57 Year old institution with highly experienced faculty Changing the mindset of the faculty from output model system to outcome model was a major challenge Establishing the robust assessment procedures, feedback collection and assessment from stake holders and enhancing the stakeholder involvement in curriculum design to assessment was a big challenge b. M S Ramaiah Institute Technology has well established undergraduate teaching institution Majority of the postgraduate programmes started between the academic years 2005 to 2014 Changing the orientation of faculty from teaching, enhancing the research culture and encouraging the faculty to improve the qualification from PG to PhD was a major challenge Establishing the Research and development centres at centre for excellence was a major challenge 4 The Practice a. With reference to the implementation of the outcome based education thee main constraint was to train the faculty to understand the concept of Vision, Mission, Program educational objectives, Program Outcomes Course Outomes and mapping of the same Modifying the curriculum by involving the stakeholders and collection of feedback from stakeholder and summarising the same with reference to curriculum changes Involving Industry in curriculum design and delivery and collecting the feedback from the employers was a major challenge Assessment of projects and seminar based on wellestablished rubrics to bring the transparency and making the students to understand the process of project implementation and need for seminar presentation to improve written and oral communication was a major challenge Developing the customised software for the assessment of course outcomes and program outcomes by direct and indirectassessment was a major challenge because of the multiple constraints involved in the assessment methodology Establishing the program assessment committee in all the programmes and training the faculty to access the

File Description	Documents
Best practices in the Institutional website	<a href="https://s3.amazonaws.com/naac.msrit.edu/new_downloads/Best+Practices.pdf">https://s3.amazonaws.com/naac.msrit.edu/new_downloads/Best+Practices.pdf</a>
Any other relevant information	Nil

### 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)

It is the top most aim of MSRIT, to provide equal opportunity to all the students to excel in the academics. In this regards, remedial classes are conducted for weak students, where extra care and one to one interaction is possible students are encouraged to come out of their it built fear and complexity, and open up to discussion in the point of their weakness. This will inculcate self confidence in students and almost all will perform excellent in the examinations. MSRIT has also taken steps to coach fundamentals of mathematics and English to students of foreign origin, particularly from Arab countries, whose English level is lesser compared to others. MSRIT students are encouraged to participate in debate competitions, national and international. Also, they take part as an interdepartmental team in New age car race competitions being held in USA, Japan, and Australia etc. Students from mechanical, computer, electronics, electrical and industrial engineering take part in such competitions making a group. As a student welfare measure, MSRIT provides life insurance cover to all the students at a nominal cost, MSRIT also provides medical checkup and counselling facilities for needy students.

## 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 Primary objective of the institute is to create Techno-Managerial power for the global needs. 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, in particular, the types of courses, the number of electives, and the curricular structure, with complete details of the course title and course contents as per the regulations.
- 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. Specific to every program, we have 3-5 Program Educational Objectives (PEOs) that are measured

through the performance of the alumni.

The Institute keenly observes the attainments of Program Outcomes (POs) of NBA and the Program Specific Outcomes (PSOs) for the respective programs which intern relates to Vision and Mission of the institution and Department as well.

#### Process for Curriculum Design:

The initial version of the curriculum is prepared by having the above design criteria, through discussions with stakeholders. The proposed curriculum is then discussed in DAB (Department Advisory Board) and is put forth to BOS (Board of Studies) where the experts from industry, academia, Alumni in addition to senior faculty members. The curriculum is then placed for approval during the Academic Council (AC).

The academic autonomy of the Institution provides the opportunity to frequently revise the curriculum based on needs and suggestions from various stake holders. Revision of the curriculum focuses mainly on introducing new courses with multiple facets for improving the soft skills, general aptitude and technical aptitude.

The students are made mandatory to upgrade their knowledge by undergoing MOOCS courses through NPTEL. Further the Internship made compulsory for all the students and as a result the student can upgrade the knowledge base in diversified fields. In addition to the curriculum, student's skills are upgraded by conducting various value added courses and become industry ready.

File Description	Documents
Upload additional information, if any	<a href="#">View File</a>
Link for additional information	<a href="http://www.msrit-igac.com/Syllabus_20-21.html">http://www.msrit-igac.com/Syllabus_20-21.html</a>

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

28

File Description	Documents
Minutes of relevant Academic Council/BOS meeting	<a href="#">View File</a>
Details of syllabus revision during the year	<a href="#">View File</a>
Any additional information	No File Uploaded

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

143

File Description	Documents
Curriculum / Syllabus of such courses	<a href="#">View File</a>
Minutes of the Boards of Studies/ Academic Council meetings with approval for these courses	<a href="#">View File</a>
MoUs with relevant organizations for these courses, if any	<a href="#">View File</a>
Any additional information	No File Uploaded

## 1.2 - Academic Flexibility

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

143

File Description	Documents
Minutes of relevant Academic Council/BoS meetings	<a href="#">View File</a>
Any additional information	No File Uploaded
Institutional data in prescribed format (Data Template)	<a href="#">View File</a>

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

28



File Description	Documents
Minutes of relevant Academic Council/BoS meetings	<a href="#">View File</a>
Any additional information	No File Uploaded
List of Add on /Certificate programs (Data Template)	<a href="#">View File</a>

### 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 the Institution has organized events such as lectures by experts, spiritual gurus and experts from HR dept. of different organizations. Activities such as annual blood donation camps, visits to orphanage, periodical health checkups organized by the NSS Dept. of the institute. To address the human values, following courses are offered by the Institution:

- **Human Physiology (BT406):** This course deals with study of life, internal workings of organisms and interaction with the world around them.
- **Food Biotechnology (BTPE08):** In this course students realize the environmental, economic, and nutritional benefits food can impart, and recognize the safety of the food products with respect to human health and the environment.
- **Human Resource Management:** Lectures by experts organized from HR department of different Organizations through placement centre.
- **Yoga:** Practiced in the induction program at the beginning of the semester where the students learn human psychology which make them live harmoniously.

b) **Professional Ethics Courses such as Professional**

Communication and Constitution of India are offered for first year UG courses of all branches of Engineering. The course engineering ethics focuses on the responsibilities, engineer rights and ethics. Professional societies are also in existence in all the departments. Guest lectures, Industrial visits, Technical quiz are some of the events organized regularly. Professional societies such as IEEE, Institute of Indian Foundrymen, Student chapters are also on the campus which help the students to gain knowledge regarding the recent developments and innovations. Intellectual Property Rights course is included in all the programs. To address Professional Ethics the following courses are offered by the Institution:

- Professional Communication (HS 24): This course helps the students to learn communication and writing skills.
- Constitution of India (HS 23): This course inculcates human rights in India.

c) Environment and Sustainability: Course on Environmental Studies of 2 credits have been offered for all UG programmes. To create awareness among the students about the environment and sustainability, a number of courses are introduced by the Institution:

- Environmental studies (HS16): deals with the issues on ethical, cross-cultural, historical context of environmental issues and the links between human and natural systems.
- Industrial and Environment Biotechnology (BT 53): to use modern biotechnological tools for environmental sustainability
- Solid waste Management (CVPE 652): sustainable methods for treatment of solid waste
- Air Pollution and Control (CVE 744): deals with the impact on health due to air pollution.

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	<a href="#">View File</a>
Any additional information	No File Uploaded

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

41

File Description	Documents
List of value-added courses	<a href="#">View File</a>
Brochure or any other document relating to value-added courses	No File Uploaded
Any additional information	No File Uploaded

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

2760

File Description	Documents
List of students enrolled	<a href="#">View File</a>
Any additional information	No File Uploaded

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

975

File Description	Documents
List of programmes and number of students undertaking field projects / internships / student projects	<a href="#">View File</a>
Any additional information	No File Uploaded

**1.4 - Feedback System**

**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	<a href="https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/img/reports/Structured+Feedback/Structured+Feedback.pdf">https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/img/reports/Structured+Feedback/Structured+Feedback.pdf</a>
Upload the Action Taken Report of the feedback as recorded by the Governing Council / Syndicate / Board of Management	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

#### 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	<a href="https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/img/reports/Structured+Feedback/Structured+Feedback.pdf">https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/img/reports/Structured+Feedback/Structured+Feedback.pdf</a>
Any additional information	<a href="#">View File</a>

### 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

6086

File Description	Documents
Any additional information	No File Uploaded
Institutional data in prescribed format	<a href="#">View File</a>

##### 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)

1339

File Description	Documents
Any additional information	No File Uploaded
Number of seats filled against seats reserved (Data Template)	<a href="#">View File</a>

## 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.

The institution assesses the learning levels of the students in two ways at the time of the commencement of the programme. Students enrolled in various disciplines are identified as slow and advanced learners based on their +2 marks and the entry level test conducted by each department. This helps to identify the slow learners and to design special coaching sessions or tutorial sessions to bridge the gap between the slow learners and the advanced learners. The tutors of the respective classes of UG and PG extend valid support in classifying the students with reports based on observation and class tests.

The institution organizes Orientation programmes/Induction programmes for freshers both at the college level and at the department level. The facilities in the college and the scope of the subjects being learnt are introduced in these sessions. Apart from this, sessions are also included to inculcate positive attitude and competitive spirit. This process helps as a base for monitoring the future progress of the students.

Bridge Courses are conducted at the departmental level to lift the students to the level of higher education. The Departments of Commerce and Computer Science organize bridge courses at the beginning of the academic year for the non-subject students enabling them to cope with the programme to which they are enrolled. The Department of Computer Science is conducting Bridge Course in two areas - Basics of Computers and Advances in Computer Science. The Department of English organizes Orientation / Bridge Course in Basic English Grammar to enable Tamil medium students to cope with the course. The Department of Mathematics organizes Bridge Course to all the first level UG programmes and first year students are admitted to MBA to cope with the knowledge requirement of the course opted by the student Strategies adopted for slow learners.

Remedial Classes are conducted with an aim to improve the

academic performance of the slow learners, absentees and students who participate in sports and other activities. This practice helps the struggling learners to improve subject knowledge and helps them catch up into their peers.

Group Study System is also encouraged with the help of the advanced learners.

Academic and personal counseling are given to the slow learners by the tutor, mentor and the counseling cell.

Bilingual explanation and discussions are imparted to the slow learners after the class hours for better understanding

Provision of simple and standard lecture notes/course materials  
Strategies for the advanced learners.

Special Coaching classes for the first 5 class toppers of every class after the internal test are conducted regularly to secure University Ranks.

Professional coaching classes - Foundation Course in CA and Foundation Course in Company Secretary ship (ACS) are conducted

Coaching is also given in Skill Development Programme like Communicative English, Aptitude and Placement.

Advanced learners are encouraged to enroll in MOOC Courses - Swayam, EdX

Provision of additional learning and reference material.

Assignment and Student Seminars on contemporary topics to enable them for placement.

Research Scholars are encouraged to conduct Seminars to the Final year UG and PG Students

Advanced Learners are provided coaching classes for competitive exams.

Students are encouraged to participate and present papers in various Seminars/ Conferences/ Workshops/ Inter-Collegiate Competitions organized by other colleges. Students representing the college in various inter-collegiate meets are provided with the benefit of retest.

Participation by the students in the in-house competitions such as Debate, Group Discussion, Problem Solving – Decision Making Exercises and Quiz Programmes are also encouraged.

Talented students are motivated to participate in extra-curricular activities, exhibitions and cultural competitions.

The academic achievements of the students are extremely motivated and highly praised by the College by celebrating Graduation Day every year. Students, who secured Ranks in the University Examination, are honored with Medals in the Graduation Day.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	Nil

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

Year	Number of Students	Number of Teachers
18/01/2022	6086	383

File Description	Documents
Upload any additional information	<a href="#">View File</a>

### 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:

MSRIT provides an effective platform for students to develop latest skills, knowledge, attitude, values to shape their behavior in the correct manner. All departments conduct innovative programs which stimulate the creative ability of students and provide them a platform to nurture their problem-solving skills and ensure participative learning. The institute organizes annual technical fest, TECHNOVATION in which students showcase their learning in the form of innovative projects. Also, students are motivated to participate in inter college as well as national level competitions. The institute focuses on the student-centric methods of enhancing lifelong learning

skills of students. Faculty members make efforts in making the learning activity more interactive by adopting the below-mentioned student-centric methods. 1. Experiential Learning: Each department conducts add-on programs to support students in their experiential learning. The institution imparts the following experiential learning practices to enhance creativity and cognitive levels of the students -

Laboratory Sessions are conducted with content beyond syllabus experiments.

Summer Internship -Students get hands on training while working in the company.

Add-on Courses on latest technologies with NPTEL, ICT-IITK, SAP, Coursera etc.

Project development on latest technologies by students where they showcase their working model in the technical fest.

Industrial Visits to engage them in experiential learning while visiting the organization.

Certification Courses (Value Added Courses) by the market experts such as Microsoft/ Google/ NSE etc. to develop their expertise

Participation in simulated events such as simulated stock exchanges or hackathons where they acquire experience of working on some real-life model. 2. Participatory Learning: In this type of learning, students participate in various activities such as seminar, group discussion, wall papers, projects, and the skill based add on courses. Students are encouraged to participate in activities where they can use their specialized technical or management skills, such as

Annual Tech Fest - It is organized every year for engineering students where selected projects are displayed at the larger platform.

Management Fest- This is organized every year by the management students in which students from different colleges participate and learn from each other.

Annual cultural program - This is organized every year for the students of the college to give a vent to their creativity.



Regular Quizzes- Quizzes are organized for student participation at intra or inter college level.

Seminar Presentation - Students develop technical skills while presenting papers in seminars.

Presentation and publishing of papers in conferences and journals - The objective is to give them exposure to learn and imbibe new skills.

MOOC Programs (NPTEL, ICT-IITK, SAP, COURSERA etc.) 3. Problem-solving methods: Departments encourage students to acquire and develop problem-solving skills. For this, college organizes expert lectures on various topics, motivate students to join MOOC courses, participate in various inter-college and intra-college technical fests and other competitions such as:

In-house summer training with project development

Regular Assignments based on problems

Mini Project development

Regular Quizzes

Case studies Discussion

Class presentations

Debates

Participation in Inter college events

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Link for additional Information	Nil

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

It is essential for the students to learn and master the latest technologies in order to be corporate ready. As a consequence, teachers are combining technology with traditional mode of

instruction to engage students in long term learning. College uses Information and Communication Technology (ICT) in education to support, enhance, and optimize the delivery of education. The following tools are used by the Institute ICT Tools:

1. Projectors- Projectors are available in different classrooms/labs
  2. Desktop and Laptops- Arranged at Computer Lab and Faculty cabins all over the campus.
  3. Printers- They are installed at Labs, HOD Cabins and all prominent places.
  4. Photocopier machines - Multifunction printers are available at all prominent places in the institute. There are four photostat machines available in campus.
  5. Scanners- Multifunction printers are available at all prominent places.
  6. Seminar Rooms- Three seminar halls are equipped with all digital facilities.
  7. Smart Board- One smart board is installed in the campus.
  8. Auditorium- It is digitally equipped with mike, projector, cameras and computer system.
  9. Online Classes through Zoom, Google Meet, Microsoft Team, Google Classroom)
  10. HackerRank (Online Coding Platform)- inter college competition
  11. MOOC Platform (NPTEL, Coursera, SAP, Udemy, Edx etc)
  12. Digital Library resources (DEL NET, MYLOFT etc).Use of ICT By Faculty
- A. PowerPoint presentations- Faculties are encouraged to use power-point presentations in their teaching by using LCD's and projectors.

They are also equipped by digital library, online search

engines and websites to prepare effective presentations.

B. Industry Connect- Seminar and Conference room are digitally equipped where guest lectures, expert talks and various competitions are regularly organized for students.

C. Online quiz- Faculties prepare online quiz for students after the completion of each unit with the help of GOOGLE FORMS.

D. Video Conferencing- Students are counseled with the help of Zoom / Google meet applications.

E. Video lecture- Recording of video lectures is made available to students for long term learning and future referencing.

F. Online competitions- Various technical events and management events such as Poster making, Ad-mad show, Project presentations, Business quiz, Debates, paper presentations etc. are being organized with the help of various Information Communication Tools.

G. Workshops- Teachers use various ICT tools for conducting workshops on latest methods such as SPSS, Programming languages, simulations etc.

File Description	Documents
Provide link for webpage describing ICT enabled tools including online resources for effective teaching and learning process	<a href="https://a.impartus.com/login/#/">https://a.impartus.com/login/#/</a>
Upload any additional information	<a href="#">View File</a>

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

#### 2.3.3.1 - Number of mentors

333

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

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

An Academic Calendar is designed to streamline the activities of the institute through the duration of the term. The Academic year is divided into three semesters, Even and Odd consisting of 14 weeks each and a supplementary semester of 7 weeks during the summer. The calendar includes important information such as Internal test dates, last dates for registration and withdrawal, final examination dates etc. Once the academic calendar is ready, the lesson plans for the subjects offered during that semester is designed. The lesson plan contains class-by-class topics that are to be covered, encompassing the syllabus. The lesson plan is also designed taking into account the Course Outcomes, thereby allocating appropriate amount of time for each topic, while restricting each unit to almost equal number of classes. A teaching diary is generated, where the actual dates for the topics in the lesson plan are listed, taking into account declared holidays and other items in the academic calendar. The teaching diary is a live document during the course of the semester, and faculty regularly updates the diary during the semester by syncing it with their attendance registers. In this way, a continuous track is kept of the progress of the content delivery process during the course of the semester.

A fortnightly report that is filled by the faculty, where the number of planned classes is compared with the number of classes actually taken in that period. If there are any deviations in the teaching diary, e.g., due to guest lectures, industrial visits etc., the faculty has to note that in the teaching diary, and make up for the class within that fortnightly period. There are also some deadlines which are to be followed for completing Internal Evaluations of projects/assignments etc - they have to be completed and evaluated prior to the final internal, so the student can get an idea of the marks she/he already has in that particular subject/lab. Finally, during the last week of classes, deadlines are announced by the Chief

Proctor for the finalization of the Internal marks component ( 50 marks in theory/lab ), which is then "frozen" prior to the last day of the term.

File Description	Documents
Upload the Academic Calendar and Teaching Plans during the year	<a href="#">View File</a>

## 2.4 - Teacher Profile and Quality

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

383

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

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

285

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	<a href="#">View File</a>
Any additional information	No File Uploaded

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

16

File Description	Documents
List of teachers including their PAN, designation, Department and details of their experience	<a href="#">View File</a>
Any additional information	No File Uploaded

## 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

File Description	Documents
List of Programmes and the date of last semester-end / year-end examinations and the date of declaration of result	<a href="#">View File</a>
Any additional information	No File Uploaded

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

12

File Description	Documents
Upload the number of complaints and total number of students who appeared for exams during the year	<a href="#">View File</a>
Upload any additional information	No File Uploaded

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 fastprocessing of registration, conduction of examination, evaluation, attainment of outcomes, announcement of results and printing of grade cards.Examination Procedures for Continuous Internal Evaluation(CIE)

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 (SMS & hard copy of progress report) to parents by the proctor/mentor. Under graduate (Semester End Examination)-

1. The student registers for the examination online, with fee payment for the regular semester subjects and re-registered subjects.
2. The eligible students list satisfying the requirements of CIE marks and attendance is generated by the automation system.
3. The admission tickets are printed for the eligible students with details of student, list of subjects eligible and photograph.
4. The Valuation process:
  - a. Answer books are bar coded by automation system to keep the identity of the student confidential.
  - b. The allocation of 10 answer books for each packet is done by randomizing the allocation in the system.
  - c. The marks sheet is generated and printed based on the marks entered by the evaluator.
  - d. The system generates the list of answer books selected for the moderation based on Institution specifications.
  - e. The results are generated after completion of valuation process.

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 by both internal and external evaluators.
3. The marks entered by the evaluators are printed and marks sheet are submitted along with the packets.
4. 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 in the evaluation process
- 2 Minimized manual data and marks entry at all levels of evaluation minimizes the mistakes
- 3 Processing of final evaluation with performance indicator concurrently.

- 4 Course attainments and other OBE analysis is carried out precisely and reports are generated to enhance the curriculum
- 5 Results are announced on institutional website and access is provided to students and parents
- 6 A digital repository with backup contains data related to examination process and student performance throughout the course.
- 7 Digital storage enables quick document retrieval for the purpose of certifications and printing certificates.
- 8 Automation with tracking systems enhances credibility of examination process.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="http://msrit.edu/examination.html#exam-section">http://msrit.edu/examination.html#exam-section</a>

## 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 graduate acquired throughout the programme. POs are derived from the graduate attributes, which vary from UG to PG 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 MCA programmes. 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 vary from 3 to 6 depending the course content. COs are defined based on the Bloom's Taxonomy by the course coordinator. 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 which includes Vision, Mission, POs, PSOs and COs of various courses of the curriculum. Curriculum books The curriculum books are issued every year to all the students of the programme which includes Vision, Mission, POs, PSOs and COs of various courses. Classrooms Boards containing Vision, Mission, POs and PSOs are displayed in all the classrooms and laboratories. Vision, Mission, POs and PSOs are displayed in all the departmental notice boards Vision, Mission, POs and PSOs of programmes offered by the department are displayed in the HOD's Chamber Vision, Mission, POs and PSOs of programmes offered by the department are displayed in the Faculty rooms Orientation program: Students of first year and their parents are made aware of Vision and Mission of the Institute, Department, Program Educational Objectives, outcome based education (OBE) and accreditation during the induction Program. Students and parents are also made aware of their roles and responsibilities in achieving vision of the Department. There are multiple ways through which the POs and PSOs are made public to the stakeholders; the primary one is publishing the POs and PSOs on the Departmental websites. For example: <http://msrit.edu/department/biotechnology.html>



<http://msrit.edu/department/cse.html>

The Program Outcomes (POs) and Program Specific Outcomes (PSOs) for all the programs in the institute and the complete list of the Course Outcomes (COs) for all the courses offered by the institution is available in the link provided in "Link for Additional Information"

File Description	Documents
Upload COs for all courses (exemplars from the Glossary)	<a href="#">View File</a>
Upload any additional information	No File Uploaded
Link for additional Information	<a href="https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/11003_2.6.1+(3).xlsx">https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/11003_2.6.1+(3).xlsx</a>

#### 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 which describes the competencies gained through the course. The POs and PSOs represent the competency gained through the programme. The mapping of COs to POs and PSOs 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. The Direct Assessment includes Continuous Internal Evaluation (CIE), Semester End Examination (SEE), project, seminar, quiz, case study, 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 end survey questions are framed by the course coordinator to find the attainment level of course. The weightage of components for CO attainment is 40% for CIE, 40% for SEE and 20% for indirect assessment. The course wise PO/PSO attainments are calculated based on the weightage assigned for the CO to PO/PSO mapping. The direct PO/PSO

attainment from CO is calculated based on the number of courses mapped. The overall attainment of PO/PSO for the programme is calculated by assigning 80% weightage to the PO attainment through CO and 20% weightage to the indirect assessment methods such as alumni survey, employer survey and graduate survey. The surveys are designed on a scale of 5 by the programme assessment committee. The assessment of surveys is done by weighted average method. The attainment level of CO, PO and PSO are compared with target level set by the course coordinator and programme assessment committee. The analysis of the attainments is carried out by the Programme Assessment Committee. If the attainment level is below the target, the committee suggests possible modifications/improvements in the teaching-learning methodologies; assessment and curriculum changes. The detailed plan of action helps in further attainment of POs/PSOs. as alumni survey, employer survey and graduate survey. The surveys are designed on a scale of 5 by the programme assessment committee. The assessment of surveys is done by weighted average method. The attainment level of CO, PO and PSO are compared with target level set by the course coordinator and programme assessment committee. The analysis of the attainments is carried out by the Programme Assessment Committee. If the attainment level is below the target, the committee suggests possible modifications/improvements in the teaching-learning methodologies; assessment and curriculum changes. The detailed plan of action helps in further attainment of POs/PSOs.

PO attainment samples are available in additional information link.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/CO+PO+attainment.docx">https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/CO+PO+attainment.docx</a>

### 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

1222	
File Description	Documents
Upload list of Programmes and number of students appear for and passed in the final year examinations	<a href="#">View File</a>
Upload any additional information	No File Uploaded
Paste link for the annual report	Nil
<b>2.7 - Student Satisfaction Survey</b>	
<b>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</b>	
<a href="https://msrit-bucket.s3.us-west-2.amazonaws.com/Uploads/Student+satisfaction+report+-+2021+(18-09-2021).pdf">https://msrit-bucket.s3.us-west-2.amazonaws.com/Uploads/Student+satisfaction+report+-+2021+(18-09-2021).pdf</a>	
<b>RESEARCH, INNOVATIONS AND EXTENSION</b>	
<b>3.1 - Promotion of Research and Facilities</b>	
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. The research policy is focused through six themes.	
<ol style="list-style-type: none"> <li>1. Establishing Centre of Excellences in thematic areas linked to industry</li> <li>2. Establishing seed funding (up to Rs 5 lakhs) for faculty</li> <li>3. Financial assistance to full time PhD scholars</li> <li>4. Incentives for quality publications</li> <li>5. Protecting the intellectual property created by faculty and students of MSRIT</li> <li>6. Establishment of a R&amp;D group with faculty from all engineering disciplines</li> </ol>	
Industry oriented R&D	
To ensure that faculty research is linked to leading industries, two Centre of Excellences have already been	

established at MSRIT. The first is the Boeing Research and Technology Lab, which comprises of the following R&D labs: Instrumentation, Production Systems, Material, NDT-Non Destructive Testing and the Tear down Analysis Lab. The second is the Imaging Technology Solutions Lab in collaboration with IGCAR and Lucid s/w solutions. Two new Centers of Excellence are being established. The first is in collaboration with Boeing, in the area of Advanced Manufacturing. The second is the Centre for Cyber Physical Systems. The objectives of both the centers are to bring faculty from diverse backgrounds onto common platforms in order to foster interdisciplinary research and improve external funding/consultancy.

#### Seed Funding

Since October 2019 MSRIT, (Ref: Circular Number RIT/PRIN/2018-19/1596) provides seed funding up to Rs 5 lakhs to enable faculty to experiment with innovative ideas. The seed funding enables faculty to develop novel prototypes and algorithms. Based on this faculty are encouraged to apply for external funding to transition those innovative ideas from prototypes to product ready systems. Faculty must have a mentor from either IISc or any of the IITs or NITs.

#### Financial assistance to full time PhD scholars

MSRIT also provides support to full time Ph.D. scholars up to Rs 10,000 per month. WRITE MORE...

#### Incentives for quality publications

Since May 2017 MSRIT has started providing incentives to faculty who have published in quality journals. The quality metric is derived directly from Scimago. There are four categories in SJR rankings, Q1 to Q4. The incentives are proportional to the ranking of the specific publication as detailed below

#### Category

#### SJR ranking

**Description**

**Incentive amount**

**A**

**Q1**

**Excellent**

**Rs. 25,000**

**B**

**Q2**

**Good**

**Rs. 10,000**

**C**

**Q3**

**Fair**

**Rs. 5,000**

**D**

**Q4**

**Acceptable**

**Rs. 2,000**

**The following are the norms to be followed for availing the incentives**

**1. Publication has all MSRIT authors:**

**1. If the publication has only faculty members as authors, the incentive amount will be divided equally among all**

MSRIT faculty members that are on the author list.

1. If the publication has student authors and one or more faculty authors, then:
  1. The faculty member will be eligible for the full amount of the incentive, provided the first author is the faculty member, OR the first author is a student and the second author is the faculty member.
  2. The faculty member will be eligible for only 50% of the incentive amount, if the first two authors are students, and the faculty member is the third author.
  3. In all other cases, the faculty members are not eligible for the incentive.
  4. In cases A2(a) and A2(b), if the publication has additional faculty members as authors (regardless of their position in the author list), the eligible incentive amount will be shared equally among them.
  
1. Publication has a combination of external and MSRIT authors:
  1. If the publication does not have any (MSRIT or external) student authors:
    1. MSRIT faculty member will be eligible for the full incentive amount if he/she is the first author.
    2. The MSRIT faculty member will be eligible for 50% of the incentive amount if he/she is the second author, while the first author is external. The MSRIT faculty member will also be eligible for 50% of the incentive amount, if he/she is the third author, and the first two are external authors from two different institutions.
  
1. If the first three (or more) authors are external, then the MSRIT faculty member will not be eligible for any incentive.
  
1. In cases B1(a), B1(b), and B1(c), if the publication has additional MSRIT faculty members as authors (regardless of their position in the author list), the eligible

incentive amount will be shared equally among them.

### Intellectual Property Policy

The Intellectual Property Policy (Ref No.: MSRIT/PRIN/2017/105) set by MSRIT sets a framework for the protection of all IPR generated at MSRIT. The key highlights from the IPR policy are described below

- "IP" Shall be matter that is the result and/or outcome of research, discovery, findings, creations, inventions, innovations, novel methods and /or processes evolved by employees of MSRIT. IP shall include written matter engendered in the course of the research or teaching-learning process by scholars, employees of MSRIT and visiting faculty.
- The IP generated must be of an original nature, amenable to patenting/copyrighting/trade marking/design registering and written matter of an original nature. The matter must be able to lend itself to definition in writing.
- Recognition of IP begins with the generator of any IP to register the fact of creation of IP with the Dean for Research (MSRIT). Applicants desiring to register their IP shall furnish a statement of creation that forms a fair description of their respective creation and a request to register. The application shall specify whether the IP is for patent/copyright/bio-diversity right reservation/design, layout confirmation/written composition for publication OR if the intention is to be a creation of proven novelty that confers status of first creation. applicant shall provide to the Dean for Research the actual item for a sealed cover that shall conform to the requirement of patenting/copyright. written or a process evolved also may be registered by providing a detailed description that will help establish future adoption or use without proper request or acknowledgement.
- The Registering applicant shall also furnish a certificate of creation / invention / discovery / authorship that explains the steps taken to establish the novelty and authenticity of the IP registered.
- The preparation of the certificate of novelty and/or originality must furnish evidence of the diligence applied in

the course of engendering the IP for registration, The claim to novelty/originality and action of first creation must be described.

- The person registering a claim shall declare all the names of persons who will share the credit for the IP registered.

- A group of not less than three nor exceeding five members shall be constituted by the Principal and Dean for Research to assess the creation being given in for IP registration shall decide on whether the creation is worthy of being accorded the status of IP and thus be registered for protection and future licensing.

- Upon the Principal and Dean for Research constituted committee deciding that an application being fit for registration, the IP shall be duly registered and the author/s be informed of the same.

- The MSRIT will, on the recommendation of the Principal and Dean for Research take steps to apply for the patenting/copyrighting/trademark registration of the matter registered. The cost of such action, up to 90% shall be borne by MSRIT.

#### FEATURES OF THE IP POLICY:

A: The MSRIT IP Policy shall apply to all employees, teachers, scholars& visiting faculty of MSRIT.

B: An unequivocal acceptance of the IP Policy needs to be given by every employee or student to abide by the rules of the Policy as amended from time to time.

C: Creators of IP who register their IP with MSRIT acknowledge that MSRIT will be the owner of the IP registered.

D: Upon registering any IP after signaling acceptance of the IP Policy, MSRIT shall have the right to apply for its protection in India or throughout the world or in specific countries, to be decided after consulting with the creator.

.3

E: The cost of obtaining or providing the protection shall be



borne by MSRIT up to the extent of 90% of the cost and 10% by the creator of the IP proposed for protection by way of patent, copyright, trademark or any other method not specified

F: MSRIT will help the creator of the IP registered to license the IP for use by external agencies depending on the nature of the innovation/invention to corporate entities only.

G: IP registered by the MSRIT gives MSRIT the right to access the IP for the sole purpose of academic work that will cover the entire gamut of the teaching-learning process and research

H: Revenues generated from licensing the IP generated and registered will be at the ratio of 70% to creator and 30% to MSRIT. The 70% will be divided among all members of the creator's team who have to be declared at the time of Registration.

I: Creators of registered IP are free to contact potential licensees' of the IP. However, it shall be the obligation of the creator to furnish all details of the transaction to MSRIT and involve the MSRIT in the negotiations. In the event of a contract being arrived at, all payment shall be made to MSRIT. The revenue generated shall be shared at 85% to the creators and 15% to MSRIT.

K: The Principal and Dean for Research shall be the primary arbiter of intellectual

dishonesty and the last level of appeal shall lie with the Chief Executive, GEF (Engg. &

GS), Any conflict of interest arising, the Chief Executive shall nominate a suitable arbitrator.

Establishment of a R&D group

Finally, MSRIT has established a Research Centre (Circular number: RIT/PRINT/2019/1919), with two coordinators (Dr. N Sriram and Dr. KRV Subramanian) and with 14 full time faculty identified to focus on research. The objectives of this research Centre is to promote research and consultancy at the institute level, to facilitate interaction with external agencies (industries, funding bodies etc.), to create multiple research thematic areas at MSRIT, and to significantly increase

the number of quality publications/patents. The Committee also assists other faculty of MSRIT to write R&D proposals. The dominant focus of this committee is to ensure that inter-disciplinary research can be conducted at MSRIT, the faculty in the committee are from all the engineering disciplines at MSRIT.

File Description	Documents
Upload the Minutes of the Governing Council/ Syndicate/Board of Management related to research promotion policy adoption	<a href="#">View File</a>
Provide URL of policy document on promotion of research uploaded on the website	<a href="http://iqac.online/files/RamaiahInstituteofTechnology/1266/Policy/11003_MSRIT_researchpolicy.pdf">http://iqac.online/files/RamaiahInstituteofTechnology/1266/Policy/11003_MSRIT_researchpolicy.pdf</a>
Any additional information	<a href="#">View File</a>

### 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)

26.64

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

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

0

File Description	Documents
e-copies of the award letters of the teachers	<a href="#">View File</a>
List of teachers and details of their international fellowship(s)	No File Uploaded
Any additional information	No File Uploaded

### 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)

217.21

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

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

11

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/Research+Grants.pdf">https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/Research+Grants.pdf</a>
List of research projects during the year	<a href="#">View File</a>

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

137

File Description	Documents
Upload copies of the letter of the university recognizing teachers as research guides	<a href="#">View File</a>
Institutional data in Prescribed format	<a href="#">View File</a>

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

7

File Description	Documents
Supporting document from Funding Agencies	<a href="#">View File</a>
Paste link to funding agencies' website	<a href="http://www.serb.gov.in/home.php">http://www.serb.gov.in/home.php</a> ; <a href="http://www.vgst.in/">http://www.vgst.in/</a>
Any additional information	<a href="#">View File</a>

### 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.

MSRiT has established 5 centres of excellence in the areas of Centre for Imaging Technologies (CIT), Centre for Advanced Materials Technology (CAMT), Centre for Cyber Physical Systems (CCPS), Centre for Antennas and Radio Frequency Systems (CARFS) and Schneider Centre of Excellence on Building Automation for providing skill enhancement training, to promote research culture and product development. All the labs are having state of art infrastructure with highly qualified faculties. More than 27 patents have been filed and published in 2020-21.

MSRIT has established Ramaih Evolute a Section 8 company in collaboration with MSRIT Entrepreneurship Cell. Entrepreneurship Development Cell basically aims at recognizing and developing soft skills of individuals. The training mainly focus on skillsets needed in Leadership & Entrepreneurship related domains and also focus on the training required for RIT students related to their academic, & Industry requirement. The

main objective is to enable them in lifelong learning. E-Cell also actively incubates start-up ideas by creating required eco system to be an entrepreneur. Entrepreneurial traits such as a leader, team player, a risk taker, excellent judge of opportunities and ability to recognize the market potential are important. With these objectives in mind E-Cell functions to guide the students of R.I.T towards a promising Entrepreneurial journey. Various activities are arranged under the wings of EDC cell. Flagship events as NATIONAL ENTREPRENEURSHIP NETWORK E-WEEK (NEN) week, EMPYREAL are held annually. The annual project exhibition "PRADARSHANA- open day event is one of the vibrant event on the campus to mention. Others include My story sessions, workshops on marketing, business ideas business proposal writing etc. The institute was awarded 8th RANK in 2020 -ARIIA (Atal Ranking of Institutions on Innovation Achievements an initiative of MoE, Govt. Of India in the category of Private or Self financed colleges/Institutes, which is an indicator related to "Innovation and Entrepreneurship Development" in higher educational Institutes (HEI).

Ramaiah Evolute has been established as section 8 company at R.I.T, to extend support system for start-up ecosystem and innovative entrepreneurship. It provides a strong mentoring team across various domains of engineering along with business and financial guidance for start-ups.

**Notable STARTUPS:**

- BIONALTEK ENTERPRISES PRIVATE LIMITED
- DROGHER TECHNOLOGIES PRIVATE LIMITED
- ADWINDOW
- PUPILMESH PRIVATE LIMITED
- STARYA MOBILITY PRIVATE LIMITED
- EDIMV PRIVATE LIMITED
- VIOSIP SOLUTIONS PRIVATE LIMITED
- SWACHHA ECO SOLUTIONS

StartUp established in 2020-21

Ajgene Sciences/ Bionaltek Enterprises Pvt Ltd : Establishment year: 2020/2021

Founder/s: Arpitha Rachandraiah, Abraham Samuel Finney, Jude Stephan

Pre-incubated at the campus as Ajgene Sciences and now

established as Bionaltek Enterprises Pvt Ltd, a health-tech start-up company registered in 2020 Incubated at EDC ,R.I.T and also has established a product development in Bangalore Bio innovation Centre. This health-tech company focus is and involvement is in developing integrated diagnostics solutions for rural and economically backward people. Biology, biosensors, Analytics and HHS technologies are the forte of this company.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="https://www.ramaiah-evolute.com/about">https://www.ramaiah-evolute.com/about</a>

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

File Description	Documents
Report of the events	<a href="#">View File</a>
List of workshops/seminars conducted during the year	<a href="#">View File</a>
Any additional information	No File Uploaded

### 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	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

### 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

65

File Description	Documents
URL to the research page on HEI website	<a href="http://msrit.edu/department/rnd.html">http://msrit.edu/department/rnd.html</a>
List of PhD scholars and details like name of the guide, title of thesis, and year of registration	<a href="#">View File</a>
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

2

File Description	Documents
List of research papers by title, author, department, and year of publication	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

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

126

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="https://www.jotform.com/tables/210282384650452">https://www.jotform.com/tables/210282384650452</a> ; <a href="https://www.jotform.com/tables/203558405673459">https://www.jotform.com/tables/203558405673459</a>

### 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****349**

File Description	Documents
Any additional information	<a href="#">View File</a>
Bibliometrics of the publications during the year	<a href="#">View File</a>

**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****23**

File Description	Documents
Bibliometrics of publications based on Scopus/ Web of Science - h-index of the Institution	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

**3.5 - Consultancy****3.5.1 - Revenue generated from consultancy and corporate training during the year (INR in lakhs)****126.29938**

File Description	Documents
Audited statements of accounts indicating the revenue generated through consultancy and corporate training	<a href="#">View File</a>
List of consultants and revenue generated by them	<a href="#">View File</a>
Any additional information	<b>No File Uploaded</b>

**3.5.2 - Total amount spent on developing facilities, training teachers and clerical/project staff for undertaking consultancy during the year****126.29938**



File Description	Documents
Audited statements of accounts indicating the expenditure incurred on developing facilities and training teachers and staff for undertaking consultancy	<a href="#">View File</a>
List of training programmes, teachers and staff trained for undertaking consultancy	No File Uploaded
List of facilities and staff available for undertaking consultancy	No File Uploaded
Any additional information	<a href="#">View File</a>

### 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

The college organizes a number of extension activities to promote institute-neighborhood community to sensitize the students towards community needs. The students of our college actively participate in social service activities leading to their overall development. The college runs effectively National Service Scheme and National Cadet Corps Units. Through these units, the college undertakes various extension activities in the neighbourhood community. NSS organizes a residential seven day camp in nearby adopted village and several activities were carried out by NSS volunteers addressing social issues which include cleanliness , tree plantation ,water conservation through construction of Bandhara,road construction, Shramdan,Social interaction, Group discussion Eradication of superstition, Beti Bacho Beti Padhao, Environmental awareness, Women empowerment, National Integrity, Aids awareness, Blood donation camp, Health check up camp, Veterinary guidance ,Farmers meet, Awareness about farmer's suicide etc. The NCC unit of the college comes under 11MAh.BN.NCC Akola. It aims at developing qualities of leadership, patriotism, maintaining discipline, character building, spirit of adventure and the ideal of self service. The NCC unit of the college organizes various extension activities as tree plantation, Road safety awareness,Ekta daud for health, Save fuel save country programme,Swachhta Abhiyan ,National equality awareness. Other than NSS and NCC units, the

various departments of the college is conscious about its responsibilities for shaping students into responsible citizens of the country by making students aware of social issues through various programmes like Environmental Awareness, Personal Health and Hygiene, Diet awareness, Road Safety, Tree Plantation, Soil and Water Testing, Plastic eradication, No vehicle day, Jananisuraksha, Programme on female foeticide, organizing visit to Orphanages and Anganwadi, Voters awareness, Blood group detection, Health check-up camps, Blood donation camps, Dental checkup camp, etc. All these mentioned activities have positive impact on the students and it developed student community relationship, leadership skill and self confidence of students. It also helped in cultivating hidden personality of students and created awareness among students.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/img/reports/NSS.pdf">https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/img/reports/NSS.pdf</a>

### 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

134

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

### 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)

11

File Description	Documents
Reports of the events organized	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

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

1460

File Description	Documents
Reports of the events	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

### 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

7

File Description	Documents
Copies of documents highlighting collaboration	<a href="#">View File</a>
Any additional information	No File Uploaded

#### 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)

19

File Description	Documents
e-copies of the MoUs with institution/ industry/ corporate house	<a href="#">View File</a>
Details of functional MoUs with institutions of national, international importance, other institutions etc. during the year	<a href="#">View File</a>
Any additional information	No File Uploaded

### 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 120 classrooms, 103 laboratories, central library, 1 auditorium, 5 seminar halls, 4 board rooms, 8 centres of excellence ( ) and playground. The computing equipment (2,889) 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 1600 mbps. 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 as per 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 which are utilized for on-line examinations, aptitude tests, project work and competitions by students of all departments. All the classrooms, laboratories, seminar halls, auditorium, board rooms, library, workshop, fitness centre, canteen, etc., is housed in several blocks. The following Table gives the built up area of the various blocks.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	<a href="http://www.msrit.edu/support/sports.html">http://www.msrit.edu/support/sports.html</a>

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

The Department of Physical Education plays an important role in a student's life on campus. 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 main objective is to encourage the growth and development of students in secure environment in order to develop fitness, team building and leadership opportunities. The college offers several facilities on campus to cater to the physical development of students with provision for both indoor and outdoor games. M. S. Ramaiah Institute of Technology has made a name for itself in a variety of sports activities like - Basketball, Cricket, Tennis, Yoga, Athletics, Taekwondo, Water Polo, Swimming, Hockey, Football, Throw Ball, Handball, Netball, Judo, Wrestling, Badminton, Chess, Carom and Table Tennis. In memory of our Founder Chairman Dr. M S Ramaiah, we organize Dr. M. S. Ramaiah Memorial State Level Inter Engineering Colleges Cricket and Basketball (M & W) tournaments every year. 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. Cash incentives are provided for outstanding performance in sports. The fitness centre is well equipped with a multi-gym, a range of free weights and aerobic equipment. A fitness instructor is available to train the staff and students of MSRIT. The fitness centre is equipped with all equipment needed for building strength, burning fat, improving general fitness, or for specific sports conditioning. The fitness centre is open to all faculty, staff and students of MSRIT. The fitness centre is maintained by the Department of Physical Education.

#### Cultural Activities:

MSRIT strongly believes in the holistic development of students, i.e., they should evolve into full-fledged and confident professionals by the time they graduate. 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. The Institute acknowledges the importance of cultural activities in the overall development of the students and 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. The college encourages students to take part in cultural activities at intra and inter-collegiate, regional, state and national levels. Students of this institution have won many awards adding

to the prestige of the Institution. Every year M. S. Ramaiah Institute of Technology organizes UDBHAV, one of the best college cultural fests of South India. It offers a platform for showcasing the limitless talent of students from all across the state and country. It is also a blooming hub for cultural activities such as dance, music, theatre and literary events.

File Description	Documents
Geotagged pictures	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://www.msrit.edu/support/deca.html">http://www.msrit.edu/support/deca.html</a>

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

131

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

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

2456.80500

File Description	Documents
Upload audited utilization statements	<a href="#">View File</a>
Details of Expenditure, excluding salary, during the years	<a href="#">View File</a>
Any additional information	No File Uploaded

#### 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 carpet area of 40350 Sqft having state of art infrastructure facilities with centralized air conditioning system and the 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 (Taylor & Francis-CRC Netbase, Springer Link, Packt Publications, New Age International, McGrawhill Education) with perpetual access and 9,115 EBSCO Management e-Book subscription package, 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 (IEEE Journals, Standards and Conf. Proceedings), Taylor & Francis, Springer, Emerald (Mgmt) packages through VTU e-Library Consortium and EBSCO. In addition, there are 4404 CD's & DVD's and 75 Video Cassettes.
- The Library resources have been completely Bar Coded and automated using LIBSYS 7 (Rel.3) -Integrated Library Package, which helps in Transactions, OPAC (Online Public Access of Catalogues) and reservation of Books, etc., for the users. Library provides a Technology Platform and Database of Plagiarism Checking Tool "Turnitin Web Tool", SCOPUS Database and "NetAnalytik-Sententia" to support R & D activities of students and faculty.
- Digital Libraries that are setup in both Library and Information Centre-1 (ESB Block-1) and Library and Information Centre-2 (LHC Block-1) libraries are well facilitated with 132 high end configured TFT Monitors computer systems that are connected to high bandwidth with speed of 400Mbps. The Faculty publications, Project Reports, Question Papers are uploaded on to the Digital Library server using Dspace Software, which is accessible within the campus covering 3,456 documents.
- Remote access to e-resources has been facilitated by library through the services of KNIMBUS Digital Library Platform with Remote Access Solution. In order to promote e-learning, the library has purchased "Local G", video content management software and hosts around 23,000 NPTEL courses on local server that are being streamed across the campus 24 x 7 uninterruptedly.
- Name of the ILS software: LIBSYS (INTEGRATED LIBRARY MANAGEMENT SOFTWARE)
- Nature of automation (fully or partially) : Fully
- Version: 7 (RELEASE 3.0)

- Year of automation: 2007
- Name of the Digital Library Software: DSpace on UBUNTU OS
- Remote Access: Knimbus Federated Search Engine
- Anti Plagiarism: Turnitin Web Tool
- Standards: BSB,BIS Standards
- Database: SCOPUS
- National Digital Library
- Swayam
- Grammar Checker: NetAnalytiks-Sententia

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://msrit.edu/facilities/library.html">http://msrit.edu/facilities/library.html</a>

**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	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>

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

**40.35738**

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

**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**

1177

File Description	Documents
Upload details of library usage by teachers and students	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

**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 computersystems/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 Wi-Fi enabled (with 200 access points) with internet speed of 1000 Mbps. A separate leased line internet connection of 600 Mbps is utilized for the wired network within the campus. This ensures the availability of high speed internet in both wired and wireless networks. The traffic through these networks is filtered through the firewall (Sophos Xg), which prevents any malicious/unwanted content from entering the

network.

Year 2020-2021 Leased Line 600 MBPS Wi-Fi 1000 MBPS Total Bandwidth 1600 MBPS Number of computers available 3600

MSRIT also has a digital library infrastructure. The institute has subscribed to various e-journals, digitalvideo lectures (NPTEL and others), which is renewed from time to time. The institutional repository is hosted in house. The campus intranet has paved way to provide seamless access to the same. The institute also has a data information centre, which houses the data related to the institution. The Institute has 24/7 IPbased surveillance system with 267 cameras, which cover the entire stretch of the institute. The recording is kept in the database for 25 days. The Student Information System is an online database of students' academic performance, which the ward/parents/guardians can access through the internet to monitor the academic performance.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://www.msrit.edu/facilities/internet.html">http://www.msrit.edu/facilities/internet.html</a>

#### 4.3.2 - Student - Computer ratio

Number of Students	Number of Computers
6046	3605

File Description	Documents
Upload any additional information	<a href="#">View File</a>

#### 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	<a href="#">View File</a>
Upload any additional information	No File Uploaded

**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**

A. All four of the above

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://iqac.online/files/RamaiahInstituteofTechnology/1266/IT-facilities/11003_4.3_4_Impartus%20Screen%20shots.pdf">http://iqac.online/files/RamaiahInstituteofTechnology/1266/IT-facilities/11003_4.3_4_Impartus%20Screen%20shots.pdf</a>
List of facilities for e-content development (Data Template)	<a href="#">View File</a>

#### 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)**

1568.60925

File Description	Documents
Audited statements of accounts	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>

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 consists of one chief engineer and one electrical engineer supported by two electricians and two carpenters who maintain the physical infrastructure of the institute including minor day to day carpentry and electrical works in labs and classrooms. DG

is maintained by the electrical engineer. Classrooms and other built up area are maintained for their day to day cleanliness by outsourced housekeeping staff. Housekeeping is outsourced to MJ Enterprises and they have employed 59 housekeepers and 3 supervisors who report to Maintenance Department. Air conditioning and lift maintenance is taken care by AMC. Potable water supply The water source for MSRIT are bore wells. The ground water is tapped and is used for domestic purposes. A portion of borewell water is treated in R.O system and distributed to students for drinking purposes. The R.O system delivers 400 L/hr. Rain water Harvesting: M.S. Ramaiah Institute of Technology has 6 blocks having five levels and large open roof area where provision has been made to harvest rain water. Each block in MSRIT has sufficient roof area and the rainwater is estimated taking concrete as impervious layer. The open area also contributes rain water taking seepage factor. Each block has rain water harvesting tank and the collected rain water is used for gardening purposes. Whenever excess rainfall occurs, the overflow from the rain water harvesting tank is directed to infiltration wells which are very near to the bore wells. The rain water gets infiltrated into the ground and recharges the bore wells. Waste water treatment: M. S. Ramaiah Institute of Technology has waste water treatment plant, with a capacity to treat 2.5 lakh litres of waste water per day using SBR technology. The treated waste water, which conforms to the pollution control board standards is reused for flushing in toilets and for gardening purposes after disinfection. The treated sewage is also used to recharge the bore wells using infiltration wells.

**Parking arrangement in MSRIT:** The Institution provides four wheeler and two wheeler parking facility for the staff and students. Four wheeler parking facility is available in Basement -1 (Area-19,500 sft) of Multipurpose Block with a parking capacity is 70 Cars. Two wheeler parking facility is available in Basement-2 (Area 3500 sqft) of Multipurpose Block capacity-1000; Basement-2 (Area 3500 sqft) - capacity 200; Fitness Centre Block (Area 3500 sqft) -Capacity -200; Basement-1 -capacity - 200; Freshers Block Basement-1 - capacity-200.

**Solid waste disposal:** The solid waste generated inside the institution premises is segregated at the source itself by providing colour coded bins. Wet waste is directly disposed to BBMP lorries. The dry waste consisting plastics and papers are disposed to scrap vendors for recycling. **e-waste disposal:** The

e - waste generated from electronics laboratories, computer science laboratories mechanical and electrical laboratories are stored scientifically in each department. At the end of each semester the authorized vendor approved by KSPCB or the material supplier is allowed to take the e-waste for treatment, recycle and disposal. Chemical Waste Treatment: The chemical waste water from laboratories are being treated separately in effluent treatment plant (ETP). The ETP has neutralisation, settling and filtration tanks. The treated water is mixed with domestic sewage. Electric Power Backup: Solar panels are installed at MSRIT campus with capacity of 431kWp. The power generation per day is about 2000kWh. This caters to the 47% electric power needs of the Institute. In addition, 2 generators of 500 kVA capacity are available in case of power failure. Budget: The Equipment, instruments, infrastructure and other facilities require a continuous maintenance and repair. Every year, sufficient funds are allocated towards Maintenance fund. Maintenance of Infrastructure: The infrastructure maintenance is done by Maintenance Department as and when required.

Equipment: All Major/advanced equipment are maintained by Annual Maintenance Contract (AMC). Minor Equipment's are repaired and maintained regularly. ICT tools The entire campus is Wi-Fi enabled (with 200 access points) with internet speed of 600 Mbps. A separate leased line internet connection of 400 Mbps is utilized for the wired network within the campus. This ensures the availability of high speed internet of 1000Mbps wired and wireless networks. Library: The Library consist of books, journals, Library Software (LIBSYS), e-journals, e-books, etc. The books and journals are bounded. The stock verification is done as a part of regular maintenance. Central library works from 08 AM to 11.00 PM. The library has Online Public Access Catalogue (OPAC) for easy search of books for the benefit of students and staff.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://igac.online/files/RamaiahInstituteofTechnology/1266/Green%20Initiatives/110_03_rain-water-harvesting-caption.pdf">http://igac.online/files/RamaiahInstituteofTechnology/1266/Green%20Initiatives/110_03_rain-water-harvesting-caption.pdf</a>

<b>STUDENT SUPPORT AND PROGRESSION</b>	
<b>5.1 - Student Support</b>	
<b>5.1.1 - Number of students benefitted by scholarships and freeships provided by the Government during the year</b>	
1194	
File Description	Documents
Upload self-attested letters with the list of students receiving scholarships	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>
<b>5.1.2 - Number of students benefitted by scholarships and freeships provided by the institution and non-government agencies during the year</b>	
60	
File Description	Documents
Upload any additional information	<a href="#">View File</a>
Institutional data in prescribed format	<a href="#">View File</a>
<b>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>	<b>A. All of the above</b>
File Description	Documents
Link to Institutional website	<a href="http://www.msrit.edu/">http://www.msrit.edu/</a>
Details of capability development and schemes	<a href="#">View File</a>
Any additional information	No File Uploaded
<b>5.1.4 - Number of students benefitted from guidance/coaching for competitive examinations and career counselling offered by the institution during the year</b>	

872

File Description	Documents
Any additional information	No File Uploaded
Number of students benefited by guidance for competitive examinations and career counseling during the year (Data Template)	<a href="#">View File</a>

**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	<a href="#">View File</a>
Details of student grievances including sexual harassment and ragging cases	No File Uploaded
Upload any additional information	<a href="#">View File</a>

## 5.2 - Student Progression

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

1011

File Description	Documents
Self-attested list of students placed	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>

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

245

File Description	Documents
Upload supporting data for students/alumni	<a href="#">View File</a>
Details of students who went for higher education	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

**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**

158

File Description	Documents
Upload supporting data for students/alumni	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

**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**

91

File Description	Documents
e-copies of award letters and certificates	<a href="#">View File</a>
Any additional information	No File Uploaded

**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 the art 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, student members are invited for the IQAC meeting. The students participate 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	No File Uploaded
Paste link for additional information	<a href="http://msrit.edu/">http://msrit.edu/</a>

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

1

File Description	Documents
Report of the event	<a href="#">View File</a>
List of sports and cultural events / competitions organised per year	<a href="#">View File</a>
Upload any additional information	<a href="#">View File</a>

### 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 relationship among alumni, students, staff and management. There is a separate alumni portal ([www.msritalumni.com](http://www.msritalumni.com)) where alumni can interact through sharing information, messages, pictures, posting jobs etc. The portal also shares news of the activities in the institute. The portal has more than 14500 members and is mobile compatible with app Vaave available at Google Play store. Its chapters at Andhra Pradesh, Chennai, Cochin, Patna, Orissa and Dubai are organizing activities to bring MSRITians in their region closer. Current activities of the association are Scholarships to students: The association initiated Merit and Means scholarships, Shri Krishna P Godasi and GMW Aspire Foundation scholarships to support financially weaker and meritorious students Merit and Means Scholarship 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/-. Every year about 40 to 50 students are awarded this scholarship. Shri Krishna P Godasi Scholarship -Shri Krishna P. Godasi Scholarship is instituted in the memory of Late Shri Krishna P. Godasi an alumnus by Soma Enterprises, to the students in any branch of engineering or architecture at M.S. Ramaiah Institute of Technology. The objective of this Scholarship is to grant full tuition fee for the entire B.E. / B.Arch course provided the students who meet the required criteria. Each year about 1011 lakhs are awarded to 2030 students. GMW Aspire foundation Scholarship MSRIT Alumni Association provides Scholarship of Rs.1,00,000.00 (Rs. One Lakh Only) through GMW Aspire Foundation which is an initiative by our distinguished alumni Sri Jasbir Singh. Project Funding: This scheme was initiated to motivate our budding engineers to get into some good projects, by providing some financial assistance by the association. MSRIT AA funds an amount of Rs. 1.3 to 1.5 Lakh every year towards UG PG Student Projects. Awards Distinguished Alumni award Eminent alumni who are at the pinnacles of organization and have significantly contributed to the nation, to the society are recognized during annual alumni meet. Gold Medals Alumni have instituted gold medals in most of the departments. First rank holders are awarded these gold medals during graduation day ceremony. Best Projects: Best Projects in both undergraduate and post graduates are awarded every year during farewell function. The award comprises of a trophy and a citation to each group member. Research Fellowship

**Scheme:** MSRIT Alumni Association has instituted a research fellowship scheme for faculty doing quality research. This comprises of a monthly fellowship of Rs 5000/ and a contingency grant of Rs 10000/ annually. **Bus Pass:** Every year about 4050 deserving students are provided grant for bus pass facility. **Library:** The association has provided a book bank facility at institutes' library. **Distinguished Alumni Talk Series:** Distinguished Alumni Talk series was initiated as per the suggestions of Governing Body. Thirteen talks under this series has been delivered by eminent alumni.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="https://www.msritalumni.com/">https://www.msritalumni.com/</a>

**5.4.2 - Alumni's financial contribution during the year**      **A. ? 15 Lakhs**

File Description	Documents
Upload any additional information	<a href="#">View File</a>

## 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, cuttingedge 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, techno-entrepreneurial activities and consultancy

forsocio-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) of the institution. The GB constitutes the Directors of the Institution, eminent academicians, renowned industrialists, the Principal and few senior faculties. The GB meets twice a year and reviews the progress/growth of the institution. 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 reviews the implementation of the suggestions made, based on the activities conducted the targets and action plan will be revised to fulfil the Vision and Mission of the Institution.

The institution has well defined organizational structure, in which many senior faculties are the members of various Decision making committees such as Governing body, Academic Council, Finance committee, Grievance committees and others to implement monitor academic/administrative matters of the institution.

Participation of teachers in the decision making bodies of the institution

Governing Body: Principal, Vice-Principal, Registrar (Academic), Controller of Examinations and one more senior faculty are the members

Academic Council: Principal, Vice-Principal, Registrar (Academic), Controller of Examinations, All Heads of the Departments and two more senior faculty are members

Finance Committee: Principal, Vice-Principal, Registrar (Academic) and two senior faculty are members

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="http://msrit.edu/gov-others.html">http://msrit.edu/gov-others.html</a>

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

M S Ramaiah Institute of Technology practice a culture of participative management, by involving faculty members in a number of administrative roles in various academic and non-academic committees such as Governing body, Academic Council, Finance committee, Sports committee, Board of Studies, Board of Examiners, Welfare Association and many other decision making committees of the Institute. The Institute has established a decentralized structure for decision making where various committees interface their decisions with Institute committees.

**Decentralization of Administrative/Academic Powers:**

The institution involves the faculty in various decision making bodies and committees to ensure smooth and systematic functioning of the institute. The Principal leads the academic and administrative process in the institution. There are various people to help Principal in academic and administrative activities including Vice-Principal, Registrar Academic, Registrar Administration, Registrar Admission, Controller of Examination and Heads of the Department.

Some of the senior faculty are members in various decision making bodies and committees such as Governing Body, Academic Council, Board of Studies, R&D committee, IQAC, etc. These committees meet time to time and ensure that the academic and administrative activities are conducted in a smooth, transparent and systematic way.

Each department has Board of Studies and Board of Examiners to ensure smooth conduction of academic activities. These two boards comprise faculty as internal members and Head of the Department as the Chairman. Eminent academicians/industry experts as external members. The Controller of Examination takes care of the complete Autonomous examination process in a transparent and systematic way.

The curriculum framed in the departments is ratified by BoS is submitted to the Academic Council for approval. The decisions of Academic Council are endorsed by the Governing Body.

**Delegation of Financial Powers:**

Chief Executive and Chief of Finance lead the finance process.

The Finance Committee helps in executing the financial activities. Finance committee comprises of CE, CoF, Principal and few senior faculty. The Finance Committee allocates budget to each department in discussion with the department heads. The financial planning by the committee is appraised to the Governing Body for approval. Keeping the strategic plan of the institution in view the Governing Body discusses the budgets proposed by each department and approves the required financial budget.

All HODs are financially permitted to spend expenditures as approved in their annual budget; in addition to this, the HoDs are permitted to take financial decisions up to Rs. 5.00 Lakh per annum for the department day-to-day expenditure.

The Principal of the institute is financially permitted to utilise up to Rs.25.00 Lakh per annum for the day-to-day academic/administrative activities in the institution. The Principal is given the leverage to expend as required considering the interest of Institution.

File Description	Documents
Upload strategic plan and deployment documents on the website	<a href="#">View File</a>
Upload any additional information	No File Uploaded
Paste link for additional Information	<a href="http://msrit.edu/">http://msrit.edu/</a>

## 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 2014-19 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 plan explicitly recognizes the need for changes in teaching learning

process, research and development, skill development programs and entrepreneurship that are necessary for the growth of institution.

The strategic plan is prepared keeping the Vision and Mission of the institute. All departments prepare a strategic plan for the department. A committee is constituted to scrutinize the department strategic plans and drafts the strategic plan for the institute to align with the Vision and Mission. The Strategic Plan Committee comprises the senior faculty of the institution. The draft strategic plan is discussed with the Principal for further improvements, if any. The draft strategic plan is improved with the astute review by two external members of the Governing Body. And finally it is approved by the Governing Body.

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. The faculty publication increased from 0.23 per faculty per year to 0.46 per faculty per year in 4 years. Total number of funded research projects received is 65 and the total funding received 10.5 crores in the last 5 years. Full time research scholars increased from 2 to 42. The total number of Ph.D awarded was 108 in last 5 years. Faculty with Ph. D qualification increased from 54 to 185. Many students are taking up internships abroad. Two 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 (up to 5 lakhs) to initiate in-house research. The faculty are encouraged to publish papers in quality journals and are given incentives of up to Rs. 25000 from the year 2017. Incentives are decided based on the Q Ranking of the journal based on SJR (Scimago Journal Ranking), based on Q1, Q2, Q3 and Q4 ranking. The quality publications in indexed journals is improved by 30% in last

three years. MSRIT is recognized as a Quality Improvement Programme Centre from AICTE to pursue Ph. D. MSRIT has introduced awards for Excellence in Teaching and Excellence in Research.

File Description	Documents
Strategic Plan and deployment documents on the website	<a href="#">View File</a>
Paste link for additional information	<a href="http://msrit.edu/">http://msrit.edu/</a>
Upload any additional information	No File Uploaded

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.

Institution has well defined organization structure and roles and responsibilities. The institution has well defined rules for effective governance in Administration and Academic activities, Institute has formed various committees.

#### 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
- Performs such other functions and institute committees, as may be necessary and deemed fit for the proper development, and fulfil the objectives for which the college has been declared as autonomous

#### Functions of Academic Council:

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. The Academic Council differs on any proposal, it will have the right to return the matter for reconsideration to the Board of Studies concerned or reject it, after giving relevant reasons to do so. Make regulations for sports, extra-curricular activities and proper maintenance and



functioning of the playgrounds and hostels. Recommends to the Governing Body, proposals for institution of new programmes of study. Recommend to the Governing Body institution of scholarships, studentships, fellowships, prizes and medals and to frame regulations for the award of the same. Advises the Governing Body regarding academic affairs. Perform such other functions as may be assigned by the Governing Body.

#### Functions of Finance Committee:

Finance Committee normally meets once a year. To prepare Budget for the Institute and also Autonomous Examinations. To arrange audit of accounts

#### Recruitment:

Head of the Departments will submit requirement for faculty to the Principal. For recruitment, an advertisement is given in the leading newspapers. Eligible candidates are called for interview short listed by the department. Selection committee comprises VTU nominee, subject experts from outside the Institute, Head of the Department, Principal, Registrar (Academic) and Management Representative.

#### Promotional Policies:

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

Institute has separate grievance redressal cell where Faculty, Students and Parents can register and become member of the grievance redressal cell.

A committee has been constituted for grievances. Committee comprises of Principal, Vice Principal, Registrar (Administration), Registrar (Academic) and few senior faculty of the institution. In addition, there are committees such as,

- Anti-Ragging Committee
- Hostel Committee.
- Women Grievance Redressal Committee and
- SC/ST and Minority Students Redressal Committee.

Online grievance can be submitted by logging into

<http://www.msrit.edugrievance.com> Also they can mail the grievances to [grievances@msrit.edu](mailto:grievances@msrit.edu) Through the portal Faculty, Students, Parents, Non-teaching staff can submit their grievances. The submitted grievances will be addressed by the committee and forward the same to the management for necessary action.

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

### 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) Document	<a href="#">View File</a>
Screen shots of user interfaces	<a href="#">View File</a>
Details of implementation of e-governance in areas of operation	<a href="#">View File</a>
Any additional information	<a href="#">View File</a>

### 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 non-teaching 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/- peryear 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	<a href="#">View File</a>
Paste link for additional information	<a href="https://www.starhealth.in/">https://www.starhealth.in/</a>

**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**

22

File Description	Documents
Upload any additional information	No File Uploaded
Details of teachers provided with financial support to attend conference, workshops etc during the year (Data Template)	<a href="#">View File</a>

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

53

File Description	Documents
Reports of the Human Resource Development Centres (UGC HRDC/ASC or other relevant centres)	<a href="#">View File</a>
Upload any additional information	No File Uploaded

#### 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.)

283

File Description	Documents
Summary of the IQAC report	<a href="#">View File</a>
Reports of the Human Resource Development Centres (UGC ASC or other relevant centers)	<a href="#">View File</a>
Upload any additional information	No File Uploaded

#### 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., Chartered 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	<a href="#">View File</a>
Paste link for additional information	<a href="https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/Statement+of+Accounts+(2020-21).pdf">https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/Statement+of+Accounts+(2020-21).pdf</a>

#### 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)

447.06489

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

#### 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. The institute is a beneficiary of TEQIP-I and TEQIP-II and has received a total of Rs. 17.94 crores towards Institutional development and training needs. 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. The details of mobilisation of funds are as shown below.

M.S RAMAIAH INSTITUTE OF TECHNOLOGY

## INCOME AND EXPENDITURE ACCOUNT

Income Year 2020-2021 Sl.No Particulars Amount in Rs. 1 Fee Collection 1,10,92,71,208 2 Interest Income 17,11,96,808 3 Other Receipts 3,51,47,586 Total - A 1,31,56,15,602

The major part of the expenditure is spent on salaries and other benefits for teaching and non-teaching staff. The various expenditures of the institution 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 cheques and balances are made for the expenditure and optimal utilization for the resources. The resources for scholarships are generated through government and non-government organizations. Alumni association generates its resources through contribution of Alumni and distributes the same for merit and mean scholarships, bus pass grant, mid-day meal scheme, project funding for UG and PG students and research funding for faculty.

Recurring Expenditure Sl.No Particulars Year 2020-21 Amount in Rs. 1 Recurring Expenditure 75,57,21,847 2 Capital Expenditure 8,76,79,938

## Income through Funded Research Projects and Consultancy

- No of External Funded Research Projects Undertaken -
  - Amount -Rs.217.21 Lakhs
- No of Consultancy Projects-
  - Amount Generated - Rs.126.29938 Lakhs

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional Information	<a href="https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/Statement+of+Accounts+(2020-21).pdf">https://s3.ap-south-1.amazonaws.com/www.msrit-igac.com/assets/Statement+of+Accounts+(2020-21).pdf</a>

## 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 being innovative and reputed higher education institution, has mechanisms for academic auditing and adopted quality management strategies in all academic and administrative aspects. The institution has an Internal Quality Assurance cell (IQAC) 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 in the strategic plan are also covered for their attainment. 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. The audit comprises the following aspects,

- Teaching & Learning
- Result Analysis
- Attainment of course outcomes and programme outcomes
- Industry participation
- Workshops/FDPs/Seminars/Conferences conducted/Attended
- Research, consultancy and quality publications

- Department budget utilization

**Internal Audits:** IQAC conducts regular internal audits. There are around 40 senior faculty identified as IQAC auditors. During semester end, there will be an audit by internal auditors. The teaching and non-teaching departments and administrative offices are inspected on various quality measures defined by the IQAC. If there is any deviation in the quality objectives the auditors record in the audit report and the same is discussed with the Principal in the closing meeting of the audit. Based on the audit report the departments are suggested for improvements, if required.

**External Audits:** Further to strengthen the quality system, since 2013 Academic Audits by external agencies have also been initiated. Once in two years external academic audit is conducted. The details of the external audits are provided in the additional information.

## 2. Pedagogy and Skill Upgradation Trainings

IQAC initiates the Pedagogy training programmes for the faculty. Since 2013 Pedagogy trainings are initiated by IQAC and all the faculty are trained in Outcome Based Education and assessment. From time to time, the newly recruited faculty are trained in Pedagogy. For skill up gradation of the faculty, Workshops/ FDPs/ Seminars/ Conferences are initiated by the IQAC. Every department is mandated to organize the professional development programmes during the vacation. The teaching and non-teaching faculty are encouraged to attend professional development programmes inside and outside the institution.

Apart from these IQAC initiates NBA and NAAC accreditation processes, Institute regularly participates in national ranking processes such as NIRF, India Today, Outlook Surveys, etc.

File Description	Documents
Upload any additional information	<a href="#">View File</a>
Paste link for additional information	<a href="http://naac.msrit.edu/">http://naac.msrit.edu/</a>



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

#### 1. 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, which contains both Direct and Indirect Assessment Methods. The attainment levels of COs and POs are compared with target values and analysed for their attainment. The scope for further improvement will be recorded based on feedback of the faculty and students by the Programme assessment Committee (PAC). The recommendations of PAC are considered for the curriculum revision and to improve teaching learning methodologies. The attainments of all the COs and POs of UG and PG programmes are audited by IQAC. Outcome Based Education (OBE) is an initiation by IQAC to reform the teaching and learning process in the institution. To inculcate self-learning capabilities, IQAC encourages online certification courses such as NPTEL/Swayam, Coursera, etc.

#### 2. 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, industry internship for the students for a period 3 to 4 weeks has been made mandatory. Around 90% of UG and PG students are undergone for internships in reputed industries related to their field of study. Many students from IT branches are selected for internships with stipend. Internships are helpful in better understanding of the courses learnt, carrying out projects and solving real time problems.

**Curriculum design:** As per IQAC procedures, Curriculum is designed by taking the feedback from the industry. Academic Council, Board of Studies and Department Advisory Boards have 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 partial delivery of the courses, Faculty development Programmes, Workshops, Seminars and Technical Talks.

File Description	Documents
Upload any additional information	No File Uploaded
Paste link for additional information	<a href="http://naac.msrit.edu/IQAC/index.html">http://naac.msrit.edu/IQAC/index.html</a>

**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	<a href="http://www.msrit-igac.com/Reports.html">http://www.msrit-igac.com/Reports.html</a>
Upload e-copies of accreditations and certification	<a href="#">View File</a>
Upload details of quality assurance initiatives of the institution	<a href="#">View File</a>
Upload any additional information	No File Uploaded

## 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 of 2014-2021. At Ramaiah, we understand the importance of promoting equity and social awareness in not only our student body and staff, but the wider community as a whole. 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. We also conduct a range of events where students can develop their technical or extracurricular skills. Ramaiah's proud sporting pedigree stems from events like the M S Ramaiah Memorial State Level Inter Colleges Basketball Tournament (2018), where both men and women can compete with the best teams from the state. We conduct Sports Day events which provide equitable opportunities for all students to showcase their talent, such as Sports for Women (April 2019). To aid with medical awareness and best health practices, we have conducted several awareness programs, especially for women. From a cancer awareness program in 2014 to a breast cancer orientation and screening program in 2019, we seek to address the fast-growing issue of cancer, and stress on the importance of prompt diagnosis. We have also taken strides towards menstrual hygiene, including Green the Red, a program in 2017 on sustainable menstrual hygiene practices and management solutions. Apart from this, our students actively participate in an annual blood donation drive for several notable blood banks in Bengaluru. Many of our outreach programs to the local community are aimed at empowering women, and we focus on giving them the skills needed in a modern setting. We have conducted several community programs, including free computer training for underprivileged women (2016-17) and the IEEE Women in Engineering - Technology Development and Community Outreach program in March 2019. We also have several outreach programs to farmers in the local community, such as Knowledge Sharing programs from 2016-2018, and educating them through workshops such as Raitha Sambruddhi (2016), which involved interactions with more than 200 farmers at Bheemasandra, and Zero-budget programs on Rain Water Harvesting (2017) and Natural Farming (2018). Our proximity to some of the best academic institutions and industry facilitates collaboration for social welfare. We have worked with the M S Ramaiah Hospital to analyze medical data for better health practices. Some companies that come for campus placements offer positions exclusively for women, to encourage female participation in the technology industry. We also celebrate occasions like Independence Day and Engineer's day with programs intended to promote equity and harmony among all. Continuing with our work from 2014-2021, 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	<a href="#">View File</a>
Paste link for additional Information	Nil

**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	<a href="#">View File</a>
Any other relevant information	<a href="#">View File</a>

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 purpose.

**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 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	<a href="#">View File</a>
Geotagged photographs of the facilities	<a href="#">View File</a>
Any other relevant information	No File Uploaded

**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**

A. Any 4 or all of the above

File Description	Documents
Geotagged photographs / videos of the facilities	<a href="#">View File</a>
Any other relevant information	No File Uploaded

**7.1.5 - Green campus initiatives include**

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

- 1. Restricted entry of automobiles**
- 2. Use of bicycles/ Battery-powered vehicles**
- 3. Pedestrian-friendly pathways**
- 4. Ban on use of plastic**
- 5. Landscaping**

A. Any 4 or All of the above

File Description	Documents
Geotagged photos / videos of the facilities	<a href="#">View File</a>
Various policy documents / decisions circulated for implementation	<a href="#">View File</a>
Any other relevant documents	<a href="#">View File</a>

7.1.6 - Quality audits on environment and energy undertaken by the institution											
<p><b>7.1.6.1 - The institution's initiatives to preserve and improve the environment and harness energy are confirmed through the following:</b></p> <ol style="list-style-type: none"> <li><b>1. Green audit</b></li> <li><b>2. Energy audit</b></li> <li><b>3. Environment audit</b></li> <li><b>4. Clean and green campus recognitions/awards</b></li> <li><b>5. Beyond the campus environmental promotional activities</b></li> </ol>	<p><b>C. Any 2 of the above</b></p>										
<table border="1"> <thead> <tr> <th>File Description</th> <th>Documents</th> </tr> </thead> <tbody> <tr> <td>Reports on environment and energy audits submitted by the auditing agency</td> <td><a href="#">View File</a></td> </tr> <tr> <td>Certification by the auditing agency</td> <td><a href="#">View File</a></td> </tr> <tr> <td>Certificates of the awards received</td> <td>No File Uploaded</td> </tr> <tr> <td>Any other relevant information</td> <td>No File Uploaded</td> </tr> </tbody> </table>	File Description	Documents	Reports on environment and energy audits submitted by the auditing agency	<a href="#">View File</a>	Certification by the auditing agency	<a href="#">View File</a>	Certificates of the awards received	No File Uploaded	Any other relevant information	No File Uploaded	
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Any other relevant information	No File Uploaded										
<p><b>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.</b></p>	<p><b>A. Any 4 or all of the above</b></p>										

File Description	Documents
Geotagged photographs / videos of facilities	<a href="#">View File</a>
Policy documents and brochures on the support to be provided	<a href="#">View File</a>
Details of the software procured for providing assistance	No File Uploaded
Any other relevant information	<a href="#">View File</a>

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.

Activity Date	Number of participants	Independence Day
15-08-2020	150 Engineers Day	15-09-2020 120 Republic day
26-01-2021	250 Womens Day	08-03-2021 250 Karnataka Formation Day
07-11-2020	100 Teachers Day	05-09-2020 360

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

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

India, as a country, includes individuals with different backgrounds viz., cultural, social, economic, linguistic, and ethnic diversities governed and guided by the Constitution irrespective of caste, religion, race sex.

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 as a responsible citizen.

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. These elements are inculcated in the value system of the college community.

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. Code of conduct is prepared for students and staff and everyone should obey the conduct rules. The affiliating University curriculum is framed with mandatory courses like Professional ethics and human values, Constitution of India, Essence of Indian Traditional Knowledge, as a small step to inculcate constitutional obligations among the students. 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. Ethical Values, rights, duties, and responsibilities of citizens are some of the topics that are enlisted in Elocution, debates, and class presentation.



File Description	Documents
Details of activities that inculcate values necessary to transform students into responsible citizens	<a href="#">View File</a>
Any other relevant information	No File Uploaded

**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	<a href="#">View File</a>
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	<a href="#">View File</a>
Any other relevant information	<a href="#">View File</a>

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 the great Indian personalities. These National festivals are celebrated to make the students aware about 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	<a href="#">View File</a>
Geotagged photographs of some of the events	<a href="#">View File</a>
Any other relevant information	No File Uploaded

## 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

Title of the Practice a. Implement outcome based education in Undergraduate and postgraduate programs b. Research promotional policy to improve RD Activities, Ranking and Accreditation 2 Objectives of the Practice a. Effective Implementation of outcome based education for improving graduate attributes and to get accreditation from National Board of Accreditation Change of accreditation from output put model to Outcome model was a major challenge to change our teaching learning, assessment methodology and enhancement of outreach activities b. Enhancing the research publications in peer reviewed journals and conference to improve Research and Consultancy component in NIRF Ranking Sudden changes in accreditation procedures, introduction of ranking system such as NIRF and QS Ranking has imposed as great challenge to improve research culture in the Institution 3 The Context a. M S Ramaiah Institute Technology is 57 Year old institution with highly experienced faculty Changing the mindset of the faculty from output model system to outcome model was a major challenge Establishing the robust assessment procedures, feedback collection and assessment from stake holders and enhancing the stakeholder involvement in curriculum design to assessment was a big challenge b. M S Ramaiah Institute Technology has well established undergraduate teaching institution Majority of the postgraduate programmes started between the academic years 2005 to 2014 Changing the orientation of faculty from teaching, enhancing the research culture and encouraging the faculty to improve the qualification from PG to PhD was a major challenge

Establishing the Research and development centres at centre for excellence was a major challenge 4 The Practice a. With reference to the implementation of the 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 collection of feedback from stakeholder and summarising the same with reference to curriculum changes Involving Industry in curriculum design and delivery and collecting the feedback from the employers was a major challenge Assessment of projects and seminar based on well established rubrics to bring the transparency and making the students to understand the process of project implementation and need for seminar presentation to improve written and oral communication was a major challenge Developing the customised software for the assessment of course outcomes and program outcomes by direct and indirect assessment was a major challenge because of the multiple constraints involved in the assessment methodology Establishing the program assessment committee in all the programmes and training the faculty to access the

File Description	Documents
Best practices in the Institutional website	<a href="https://s3.amazonaws.com/naac.msrit.edu/new_downloads/Best+Practices.pdf">https://s3.amazonaws.com/naac.msrit.edu/new_downloads/Best+Practices.pdf</a>
Any other relevant information	Nil

### 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)

It is the top most aim of MSRIT, to provide equal opportunity to all the students to excel in the academics. In this regards, remedial classes are conducted for weak students, where extra care and one to one interaction is possible students are encouraged to come out of their it built fear and complexity, and open up to discussion in the point of their weakness. This will inculcate self confidence in students and almost all will perform excellent in the examinations. MSRIT has also taken steps to coach fundamentals of mathematics and English to students of foreign origin, particularly from Arab countries, whose English level is lesser compared to others. MSRIT

students are encouraged to participate in debate competitions, national and international. Also, they take part as an interdepartmental team in New age car race competitions being held in USA, Japan, and Australia etc. Students from mechanical, computer, electronics, electrical and industrial engineering take part in such competitions making a group. As a student welfare measure, MSRIT provides life insurance cover to all the students at a nominal cost, MSRIT also provides medical checkup and counselling facilities for needy students.

File Description	Documents
Appropriate link in the institutional website	Nil
Any other relevant information	<a href="#">View File</a>

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

As evidenced by the NIRF data since the year 2016, MSRIT has a strong teaching culture, and also a good placement record. It has a relatively good gender mix among faculty as well as students, and it has diversified student community. On the other hand, MSRIT is currently lagging behind in research output relative to top engineering institutions. Analysis of the data further shows that the RPC (Research and Professional Practice) score has the strongest correlation with the overall rank considering the top 50 engineering institutions. Based on the SWOC analysis, following plans of action are identified for the next academic year. To provide centralized facility, at least one Centre of Excellence in the area of Advanced Materials. To enhance industry oriented courses. Increase international MoUs. Support and enhance use of online tools such as NPTEL, SWAYAM and MOOC. Provide excellent Teaching Learning opportunity in multidisciplinary teaching. Promote quality research. Enhance seed money to faculty for research. Enrich quality publications.