



## Yearly Status Report - 2019-2020

### Part A

#### Data of the Institution

<b>1. Name of the Institution</b>	MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE
Name of the head of the Institution	Dr. R.K. Pandit
Designation	Director
Does the Institution function from own campus	Yes
Phone no/Alternate Phone no.	9107512409354
Mobile no.	9926454902
Registered Email	director@mitsgwalior.in
Alternate Email	iqac@mitsgwalior.in
Address	Gola Ka Mandir
City/Town	Gwalior
State/UT	Madhya Pradesh
Pincode	474005

<b>2. Institutional Status</b>					
Autonomous Status (Provide date of Conformant of Autonomous Status)			12-Sep-2017		
Type of Institution			Co-education		
Location			Urban		
Financial Status			state		
Name of the IQAC co-ordinator/Director			Dr. Pratesh Jayaswal		
Phone no/Alternate Phone no.			9107512409300		
Mobile no.			9826561725		
Registered Email			director@mitsgwalior.in		
Alternate Email			iqac@mitsgwalior.in		
<b>3. Website Address</b>					
Web-link of the AQAR: (Previous Academic Year)			<a href="https://mitsgwalior.in/NAAC/AQAR%20018-19%20Submitted%20to%20NAAC%20on%2031.12.2019.pdf">https://mitsgwalior.in/NAAC/AQAR%20018-19%20Submitted%20to%20NAAC%20on%2031.12.2019.pdf</a>		
<b>4. Whether Academic Calendar prepared during the year</b>			Yes		
if yes,whether it is uploaded in the institutional website: Weblink :			<a href="http://mitsgwalior.in/ACalendar.php">http://mitsgwalior.in/ACalendar.php</a>		
<b>5. Accrediation Details</b>					
Cycle	Grade	CGPA	Year of Accrediation	Validity	
				Period From	Period To
1	B++	2.89	2017	12-Sep-2017	11-Sep-2022
<b>6. Date of Establishment of IQAC</b>			27-Dec-2016		
<b>7. Internal Quality Assurance System</b>					
Quality initiatives by IQAC during the year for promoting quality culture					
Item /Title of the quality initiative by IQAC	Date & Duration		Number of participants/ beneficiaries		

The Innovative Research Scheme launched this year	03-Jan-2020 1	12
Workshop on Blooms Taxonomy for Assessment Design	13-Aug-2019 2	34
Workshop on Use of MOODLE CO attainment, indirect assessment, CO feedback	20-Sep-2019 1	19
Workshop on Analysis of stakeholder feedback	16-Dec-2019 1	18
Workshop on Enhancing Alumni Interaction	16-Dec-2019 1	21
In-House review of Self-Assessment Report (SAR) to be submitted for accreditation to National Board of Accreditation (NBA)	04-Sep-2019 6	122
The Girls Grievances Cell (GGC) organized a workshop	12-Sep-2019 1	319
Conduction of AICTE sponsored first interdisciplinary International conference	02-Nov-2019 2	148
Conduction of Second International Symposium	19-Dec-2019 3	60
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**8. Provide the list of Special Status conferred by Central/ State Government-UGC/CSIR/DST/DBT/ICMR/TEQIP/World Bank/CPE of UGC etc.**

Institution/Department/Faculty	Scheme	Funding Agency	Year of award with duration	Amount
Institutional	TEQIPIII	NPIU/MHRD, New Delhi	2017 3	165000000
Institutional	DST-FIST (level 0)	DST, New Delhi	2019 5	4940000
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**9. Whether composition of IQAC as per latest NAAC guidelines:**

Yes

Upload latest notification of formation of IQAC

[View File](#)

**10. Number of IQAC meetings held during the year :**

4

The minutes of IQAC meeting and compliances to the decisions have been uploaded on the institutional website	Yes
Upload the minutes of meeting and action taken report	<a href="#">View File</a>
<b>11. Whether IQAC received funding from any of the funding agency to support its activities during the year?</b>	Yes
If yes, mention the amount	69160719
Year	2019
<b>12. Significant contributions made by IQAC during the current year(maximum five bullets)</b>	
<p>? Ranking student clubs/chapters on the basis of performance Mechanism with detailed guidelines was prepared by the student development cell (SDC) for ranking the performance of the 50 plus student clubs and chapters operational in the institute. The idea is to encourage the activities of clubs through monetary awards and by generating a healthy competition among them</p>	
<p>? Development of Administrative Efficiency Index: A mechanism for computing a numeric 'Administrative Efficiency Index (AEI)' was developed and implemented w.e.f January 2020 to rate the administrative performance of the various departments on a scale of 10.The idea behind the development of a numeric index is to encourage timely completion and submission of documents/reports/information etc. by the various departments and cells to ensure:</p> <ul style="list-style-type: none"> <li>o Timely completion of all routine academic other student activities such as curriculum development, alumni industry connect, student counselling, mentoring, assessments, various feedbacks their analysis, PTM etc.</li> <li>o Timely submission of impact analysis reports/ATR/COPO attainments etc</li> <li>o Overall quality improvement for making students industry ready</li> <li>o Improvement of Institute Level Documentation required for accreditation</li> <li>o To bring overall efficiency in routine academic and quality improvement processes (avoiding the need for constant reminders and notices)</li> </ul>	
<p>? Promoting a culture of meritocracy in the institute A mechanism was proposed to promote a culture of meritocracy over mediocrity and to identify and encourage good performers, the ones who take ownership and initiative to start new practices, and/or excel in the existing activities. The IQAC decided to reward such persons on the basis of recommendations/nomination from the concerned heads.</p>	
<p>? Implementation of credit transfer through MOOCs The 'credit transfer from MOOCs' policy was already in place (approved by the academic council and affiliating university). Credits were transferred from MOOCs in June 2020.</p>	
<p>? Innovative Research Scheme launched: To encourage research activities in the institute the Innovative Research Scheme was launched last year. This year an amount of Rs. 18.84 Lacs has been recommended to 12 faculty members (on the basis of recommendations of the research committee, which evaluated the research proposals after presentation and discussions with faculty members) as seed money for starting new research in different areas as proposed by them in their</p>	

research proposals. It is expected that the faculty members will gain experience of handling research projects and they will be able to get support from the central funding agencies/industries for continuing their work further.

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**13. Plan of action chalked out by the IQAC in the beginning of the academic year towards Quality Enhancement and outcome achieved by the end of the academic year**

Plan of Action	Achievements/Outcomes
Flexible Curriculum	<p>? Flexible Curriculum implemented w.e.f. 201718 ? A discussion orientation session was conducted by the Academic Development Cell (ADC) with the faculty to brainstorm on the different provisions of this curriculum ? The list of courses approved by BoS and Academic Council for getting an (i) Honours in parent discipline or (ii) Minor specialization in other allied engineering disciplines displayed on the institute website ? The new provision of opting (i) open category (OC) electives and (II) departmental electives (DE) from MOOCs was available to students of the Institute for the first time. ? The DE to be conducted in traditional mode will offer about 34 options for students out of which at least one course to be conducted in collaboration with an Industry Expert. ? 18 courses were offered under the open elective category during the January -April 2020 session for the VI semester students. ? The Academic Development Cell (ADC) prepared a general agenda for the Board of Studies to include all the provisions of the Flexible Curriculum which are to be initiated in the upcoming academic session. ? The meetings of respective Board of Studies was conducted between 17th to 24th November 2019 for proposing the course objectives outcomes, detailed syllabi, list of experiments etc for the new theory lab courses to be offered. ? The same was approved by the Academic Council on 7th December 2019.</p>
Making students Self-learners through on-line MOOC courses	<p>? NPTEL Chapter registrations of students and faculty are continuously increasing ? The SWAYAM/NPTEL local chapter of MITS ranked 31st in list of 100 top ranking chapters issued by NPTEL for the July-Dec. 2019 session. ? 70</p>

	<p>faculty members earned NPTEL certificates; Elite (30), Elite+silver (24) and course topper categories (06).  ? 544 students earned NPTEL certificates; Elite+Gold (14); Elite+silver (135), Elite (235), and course topper categories (24).</p>
<p>Computation of MOODLE working index (MWI) for enhancing digital teaching learning</p>	<p>? This initiative was very successful. By the end of the session it was found that all faculty members started using MOODLE for all 10 identified teaching-learning-evaluation activities. ? The average MWI of the institute was 9.41 out of 10. ? For five core departments it was 100% i.e 10 out of 10 in November 2019.</p>
<p>Outcome Based Education (OBE)</p>	<p>? The commitment of the institute towards the implementation of OBE in Teaching-Learning-Evaluation was strengthened by conduction of orientation sessions for students ? The role of "Bloom's Taxonomy for Assessment Design" was emphasized through workshops by external as well as internal experts.</p>
<p>Indirect assessment of course outcomes</p>	<p>? For the attainment of Course Outcomes (CO) 80% weightage is given to direct assessment and 20% to indirect assessment. ? The indirect assessment was so far being computed only from the CO feedback of students. ? Hence after discussions and deliberations, it was proposed by the Academic Development Cell and approved in the HoDs &amp; Deans meeting with the Director on 05/11/2019, that following activities are to be conducted for the indirect assessment of COs of all courses for all UG &amp; PG programmes.</p> <ul style="list-style-type: none"> <li>o Course end seminar (weight 10%)</li> <li>o One minute paper writing (weight 5%)</li> <li>o CO feedback for each course (weight 5%)</li> </ul> <p>? For the smooth implementation of this activity detailed instructions and formats were prepared by the ADC. ? The activity was conducted just before the beginning of practical examinations in November 2019. ? On the basis of students' presentations in groups of about 5, the assessment will be done by faculty members in levels (1, 2 or 3). ? The levels will be based on (i) demonstration/understanding of the course outcome (ii) presentation (iii) communication (iv) team work &amp; (v) Ethics</p>

<p>Timely initiative taken for on-line conduction of mid semester examination</p>	<p>? The house recognized the efforts taken by Institute under the digital and exam reforms initiatives, on-line conduction of examination, a trial examination has started at initial stage, the details are as follows: ? The mid-semester examination for 5th semester students of course "Software Engineering" code 160502 was conducted in the online mode for 62 students on 17 Oct 2019. ? Additional 30 minutes were allotted to the students due to the new pattern of online mode. Examination has been conducted successfully without any issues.</p>
<p>Conduction of Hackathon</p>	<p>? The Problem statement was taken from participating team members. ? Total 11 teams participated. ? 5 teams were selected in software category and 1 team was selected in hardware category. ? The result was computed by taking the average of the results of 7 Jury members.</p>
<p>Conduction of online classes during COVID period (March-April 2020)</p>	<p>• In view of the COVID-19 pandemic, various advisory were issued to faculty &amp; Staff members of the Institute regarding guidelines for ensuring Teaching Learning activities through online mode. • In addition to above, all the faculty members were instructed to submit the details of work done from home including online sessions of students Teaching &amp; Learning and online Mid Sem Examination conducted. • Further, teaching learning activities (online classes/interactive sessions with students) conducted during lockdown at various department level is compiled below for the period 16th March 2020 to 22nd April 2020 as: • Total Interactive Classes : 2021 • Videos on youtube/ Google Drive : 1364</p>
<p>Conduction of online remedial classes during COVID period (April-June 2020)</p>	<p>? The remedial classes for UG &amp; PG students were conducted. through online mode during lockdown &amp; subsequent unlock-1 in various departments ? Total 1391 classes were conducted in various departments and the students who had not been able to attend regular classes due to the sudden lockdown were thus benefitted.</p>
<p>Validation of online/open book mid-semester examination</p>	<p>? The mid-semester II was conducted online on MOODLE from 26th April to 2nd May 2020. ? For validation, statistical comparison of results of online open book examination (MCQs as well as</p>

subjective) was done with the mid-semester I results which was in off-line traditional mode. ? Out of the 259 courses for which the results of the online mid-semester examination were analyzed, about 45 courses (< 17.5 % ) were found to have low variation in students' scores ? Efforts were made to identify the reasons for very low variation/very high scores for all students to compare and validate the online/open book mid-semester examinations conducted through the MOODLE.

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**14. Whether AQAR was placed before statutory body ?**

Yes

Name of Statutory Body	Meeting Date
Executive Committee of the Board of Governors	16-Apr-2021

**15. Whether NAAC/or any other accredited body(s) visited IQAC or interacted with it to assess the functioning ?**

Yes

Date of Visit

20-Feb-2021

**16. Whether institutional data submitted to AISHE:**

Yes

Year of Submission

2019

Date of Submission

28-Feb-2019

**17. Does the Institution have Management Information System ?**

Yes

If yes, give a brief description and a list of modules currently operational (maximum 500 words)

• IMS (Information Management System) is a cost effective integrated online service that manages Post Admission Registration, Examination Result Processing, faculty feedback, online students' document verification for employment, Library and Accounts of the Institute. IMS has been running successfully since the last four years with the objective to computerize the work and reduce paper work. Services are online and can be accessed via the internet. It reduces human effort and



provides high security availability of data. Students can register subjects (flexible curriculum online, pay fee and can see/download their results. IMS provides a fully automated Examination Result processing system in which marks are obtained in online mode, the TR is generated final mark sheets are immediately visible to the students. • Total 8900 users (Present Active Users : 4984) of 53 different departments/sections are registered. The IMS comprises of the following modules: ? IMS (for student) # IMS (Employer for documents verification) ? MIS (for faculty/Staff) ? ECS (for Examination) ? Library Module ? Admission (PG admission) Module • IMS/MIS is deployed / hosted on the cloud servers and ECS system is installed in the institute, following is the configuration of ECS System. Processor: Intel Xeon ,RAM 16 GB, 1.2 TB HDD.

## Part B

### CRITERION I – CURRICULAR ASPECTS

#### 1.1 – Curriculum Design and Development

1.1.1 – Programmes for which syllabus revision was carried out during the Academic year

Name of Programme	Programme Code	Programme Specialization	Date of Revision
BTech	110406	Water Resource Engg	23/11/2019
Mtech	580211	Semiconductor Control Drives	23/11/2019

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1.1.2 – Programmes/ courses focussed on employability/ entrepreneurship/ skill development during the Academic year

Programme with Code	Programme Specialization	Date of Introduction	Course with Code	Date of Introduction
BTech	Civil Engineering	02/07/2019	Summer Internship Project - II (110507)	05/07/2019
BTech	Civil Engineering	01/01/2020	Geotech Engg - II (Foundation Engg) (110652)	06/01/2020

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#### 1.2 – Academic Flexibility

1.2.1 – New programmes/courses introduced during the Academic year

Programme/Course	Programme Specialization	Dates of Introduction
BTech	Integrated Waste Management for Smart City (900201)	30/05/2020
BTech	Maintenance & Repair of Concrete Structures (110651)	23/11/2019
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1.2.2 – Programmes in which Choice Based Credit System (CBCS)/Elective Course System implemented at the College level during the Academic year.

Name of programmes adopting CBCS	Programme Specialization	Date of implementation of CBCS/Elective Course System
BTech	Civil Engineering	02/07/2019
BTech	Mechanical Engineering	02/07/2019
BTech	Automobile Engineering	02/07/2019
BTech	Electrical Engineering	02/07/2019
BTech	Electronics Engineering	02/07/2019
BTech	Electronics & Tele Communication Engineering	02/07/2019
BTech	Computer Science & Engineering	02/07/2019
BTech	Information Technology	02/07/2019
BTech	Chemical Engineering	02/07/2019

### 1.3 – Curriculum Enrichment

1.3.1 – Value-added courses imparting transferable and life skills offered during the year

Value Added Courses	Date of Introduction	Number of Students Enrolled
Data Science	18/05/2020	138
Cyber Security	18/05/2020	125
Advances in Mechanical Engineering	18/05/2020	151
Field Outlook in Geo-technical Engineering Projects	18/05/2020	65
Energy Efficient Building (Planning, Design Evaluation) and Pavement Design and Materials (Overview)	18/05/2020	55
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1.3.2 – Field Projects / Internships under taken during the year

Project/Programme Title	Programme Specialization	No. of students enrolled for Field Projects / Internships
BTech	Civil Engineering	296
BTech	Mechanical/Automobile Engineering	379

BTech	Electrical Engineering	338
BTech	Electronics Engineering/ET	558
BTech	CSE/IT	405
BTech	Chemical Engineering	88
BArch	Architecture	33
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## 1.4 – Feedback System

### 1.4.1 – Whether structured feedback received from all the stakeholders.

Students	Yes
Teachers	Yes
Employers	Yes
Alumni	Yes
Parents	Yes

### 1.4.2 – How the feedback obtained is being analyzed and utilized for overall development of the institution? (maximum 500 words)

Feedback Obtained
<p>The stakeholder comments are employed for overall improvement of Curriculum, Teaching-Learning Evaluation Practices, Academic Infrastructure, employability, Graduate skills covering all domains (cognitive, psychomotor and affective), soft skills and for imparting holistic and all round development. The feedback forms are reviewed periodically to include latest issues and practices. The various feedbacks collected during the year, their frequency and impact is listed below.</p> <ol style="list-style-type: none"> <li>1. Student feedback on faculty is collected twice a semester.</li> <li>2. Feedback Collection Analysis process: During the Covid pandemic the feedback parameters were modified to suit the online digital teaching learning.</li> <li>3. The compiled individual faculty/course wise information is immediately communicated through e-mail to the concerned faculty HoD for initiation of corrective actions.</li> <li>4. The Faculty Feedback Index (FFI) is calculated on a scale of 5 using the weighted average of all metrics as graded by students on a scale of 1 to 5.</li> <li>5. Action Taken report: The HoD discusses the feedback report individually, with each faculty, the corrective actions are deliberated/recorded and sent to the office of the Dean Academics within 10 days.</li> <li>6. Basis of reward: "Letters of Appreciation" from the Director are issued on satisfying both of the following criteria: (i) The faculty gets an FFI score greater than 4 in both the feedbacks in the semester. (ii) At least 50 of the student responses are available.</li> <li>7. Feedback on course curriculum is collected before the BoS meeting from all the stakeholders, it is analyzed and included in the curriculum development process through the BoS. Feedback on course curriculum is also collected from the faculty members, the alumni and employers also, twice a year before the Board of Studies meetings.</li> <li>8. Feedback on Course Outcomes (CO) is collected for each course after completion of the course. The CO feedback is used for (i) Calculation of indirect attainment of COs and (ii) The CO attainments are reviewed and then actions are implemented through the BoS.</li> <li>9. PO Feedback from final year students is collected at the time they are graduating from the institute to find out how far the programme outcomes are met. This information helps in the indirect assessment of graduate attributes.</li> <li>10. Parent Satisfaction Survey is conducted to get suggestions, comments and feedback on Teaching-Learning-Evaluation Practices Curriculum, Academic, Infrastructure, Employability and Overall improvement.</li> </ol>

## CRITERION II – TEACHING- LEARNING AND EVALUATION

### 2.1 – Student Enrolment and Profile

#### 2.1.1 – Demand Ratio during the year

Name of the Programme	Programme Specialization	Number of seats available	Number of Application received	Students Enrolled
MCA	Lateral Entry PG	40	33	33
BTech	Lateral Entry UG	88	63	63
MArch	Architecture	18	14	14
BTech	All Engg. UG	976	967	967
BArch	Architecture	40	40	40
Mtech	All Engg. PG	176	56	56
MCA	MCA PG	66	20	20

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### 2.2 – Catering to Student Diversity

#### 2.2.1 – Student - Full time teacher ratio (current year data)

Year	Number of students enrolled in the institution (UG)	Number of students enrolled in the institution (PG)	Number of fulltime teachers available in the institution teaching only UG courses	Number of fulltime teachers available in the institution teaching only PG courses	Number of teachers teaching both UG and PG courses
2019	3984	306	124	3	97

### 2.3 – Teaching - Learning Process

#### 2.3.1 – Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc. (current year data)

Number of Teachers on Roll	Number of teachers using ICT (LMS, e-Resources)	ICT Tools and resources available	Number of ICT enabled Classrooms	Number of smart classrooms	E-resources and techniques used
224	224	45	44	9	11

[View File of ICT Tools and resources](#)

[View File of E-resources and techniques used](#)

#### 2.3.2 – Students mentoring system available in the institution? Give details. (maximum 500 words)

• Mentor - Mentee system is functioning in the Institute. Under this system as soon as the admission process of UG 1st year is over, a list is prepared where in for every 5-6 first year students (mentees) of different branches, two senior students (mentors) and one faculty (teacher mentor) are appointed. • All faculty members are involved for making the system effective. Total 174 teacher mentors in the current academic session 2019-2020 and the faculty-student ratio is about 1:5. • Meetings of Mentor- mentee with teacher mentor are organized on I IV Saturday between 4.00 to 5.00 p.m., and additional meetings whenever required to address the issues and concern of mentees. • Minutes of the meetings are maintained. Google form is created for record purpose. Based on the requirements, following measures are taken by teacher mentors: ? Introduced about facilities available in college, in particular about availability of e-books in the library. IInd year student mentors were asked to help the first year student for books and notes. ? Concerned department has been contacted for the rectification of issues like books not available in library, study material, etc. ? Suggestions regarding how to handle college life and how to prepare for exams were given. ? Encouragement to explore student club and Extra-

curricular activities ? Whatsapp group were created for better coordination and response. ? Students were given a brief idea about GATE GRE. ? Guided the students to see videos of the experiment performed in the lab., and compare it with the process they performed so as to have better understanding and error can be minimized. ? Mentor student guided the mentee students on how to prepare for EEES course. Faculty mentor informed the relevance of studying the course on EEES and availability of MOODLE. ? Apprised the students about study materials available on internet especially on NPTEL courses and asked the mentee students to prepare their own notes from exams point of view.

Number of students enrolled in the institution	Number of fulltime teachers	Mentor : Mentee Ratio
3686	224	1:16

## 2.4 – Teacher Profile and Quality

### 2.4.1 – Number of full time teachers appointed during the year

No. of sanctioned positions	No. of filled positions	Vacant positions	Positions filled during the current year	No. of faculty with Ph.D
227	224	3	61	65

### 2.4.2 – Honours and recognition received by teachers (received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the year )

Year of Award	Name of full time teachers receiving awards from state level, national level, international level	Designation	Name of the award, fellowship, received from Government or recognized bodies
2019	Prof. Aditya Kumar Agarwal	Assistant Professor	NPTEL EliteSilver Certificate for Integrated Waste Management for a Smart City - Online (Topper of 5 in this course)
2019	Prof. Nupur Verma	Assistant Professor	NPTEL EliteSilver Certificate for Sustainable Materials and Green Buildings - Online (Topper of 5 in this course)
2019	Ar. Versha Sinha	Assistant Professor	Mentored students for Birla Uttam Architect's competition, in which student's group stood 2nd. Won Rupees 50,000/-
2019	Ar. Pranshi Jain	Assistant Professor	Mentored students for Birla Uttam Architect's competition, in which student's group 4th place Won Rupees 10,000/-
2019	Prof. Sharad Agrawal	Assistant Professor	Best mentor award for NPTEL course Law of

			Thermodynamics
2019	Dr. Jyoti Vimal	Assistant Professor	NPTEL EliteGold Certificate for Basics of Finite Element Analysis - I (Topper of 2 in this course)
2019	Prof. Praveen Bansal	Assistant Professor	Best SPOC for Instrumental role in NPTEL Local Chapter for July-Dec 2019
2019	Prof. Arpita Singhal	Assistant Professor	NPTEL EliteSilver Certificate for Digital Circuits - Online (Topper of 5 in this course)
2019	Prof. Rishabh Shukla	Assistant Professor	NPTEL EliteSilver Certificate for Control Engineering - Online (Topper of 2 in this course)
2019	Prof. Awadhesh Gupta	Assistant Professor	NPTEL EliteSilver Certificate for Control Engineering - Online (Topper of 2 in this course)
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## 2.5 – Evaluation Process and Reforms

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

Programme Name	Programme Code	Semester/ year	Last date of the last semester-end/ year-end examination	Date of declaration of results of semester-end/ year- end examination
BTech	Civil Engineering .	I Sem	20/12/2019	09/01/2020
BTech	Civil Engineering	III Sem.	26/11/2019	09/01/2020
BTech	Civil Engineering	VIII Sem.	31/08/2019	02/09/2019
BTech	Civil Engineering	V Sem.	27/11/2019	09/01/2020
BTech	Civil Engineering	VII Sem.	20/11/2019	31/12/2019
<a href="#">View File</a>				

2.5.2 – Average percentage of Student complaints/grievances about evaluation against total number appeared in the examinations during the year

Number of complaints or grievances about evaluation	Total number of students appeared in the examination	Percentage

**2.6 – Student Performance and Learning Outcomes**

2.6.1 – Program outcomes, program specific outcomes and course outcomes for all programs offered by the institution are stated and displayed in website of the institution (to provide the weblink)

<http://mitsgwalior.in/deptdetails.php>

**2.6.2 – Pass percentage of students**

Programme Code	Programme Name	Programme Specialization	Number of students appeared in the final year examination	Number of students passed in final year examination	Pass Percentage
B.E. (Final Year)	BE	Electronics & Telecommunication Engineering	47	47	100
B.E. (Final Year)	BE	Automobile Engineering	61	61	100
B.E. (Final Year)	BE	Biotechnology	9	9	100
B.E. (Final Year)	BE	Chemical Engineering	51	51	100
B.E. (Final Year)	BE	Information Technology	68	68	100
B.E. (Final Year)	BE	Computer Science & Engineering	147	147	100
B.E. (Final Year)	BE	Electronics Engineering	138	137	99
B.E. (Final Year)	BE	Electrical Engineering	145	145	100
B.E. (Final Year)	BE	Mechanical Engineering	133	133	100
B.E. (Final Year)	BE	Civil Engineering	139	138	99

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**2.7 – Student Satisfaction Survey**

2.7.1 – Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design the questionnaire) (results and details be provided as weblink)

[https://mitsgwalior.in/NAAC/Student%20Satisfaction%20Survey%20Report%20-%202020%20Batch%20and%20Faculty%20Feedback%20Summary%20with%20Samples%20\(July%202019%20to%20June%202020\).pdf](https://mitsgwalior.in/NAAC/Student%20Satisfaction%20Survey%20Report%20-%202020%20Batch%20and%20Faculty%20Feedback%20Summary%20with%20Samples%20(July%202019%20to%20June%202020).pdf)

**CRITERION III – RESEARCH, INNOVATIONS AND EXTENSION****3.1 – Promotion of Research and Facilities**

3.1.1 – The institution provides seed money to its teachers for research

Yes

Name of the teacher getting seed money

Twelve Faculty

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### 3.1.2 – Teachers awarded National/International fellowship for advanced studies/ research during the year

Type	Name of the teacher awarded the fellowship	Name of the award	Date of award	Awarding agency
<b>No Data Entered/Not Applicable !!!</b>				
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### 3.2 – Resource Mobilization for Research

#### 3.2.1 – Research funds sanctioned and received from various agencies, industry and other organisations

Nature of the Project	Duration	Name of the funding agency	Total grant sanctioned	Amount received during the year
Major Projects	2019	AICTE, New Delhi	8157044	2859875
Major Projects	2019	MHRD, New Delhi	15876000	15876000
Major Projects	2019	TEQIP III	1884950	1884950
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#### 3.2.2 – Number of ongoing research projects per teacher funded by government and non-government agencies during the years

0.138

### 3.3 – Innovation Ecosystem

#### 3.3.1 – Workshops/Seminars Conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the year

Title of workshop/seminar	Name of the Dept.	Date
In House Interactive Workshop on Analysis of Stakeholder feedback	Electrical Engineering	16/12/2019
Online National Workshop on Robotics and Industrial Automation	Electrical Engineering	20/06/2020
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#### 3.3.2 – Awards for Innovation won by Institution/Teachers/Research scholars/Students during the year

Title of the innovation	Name of Awardee	Awarding Agency	Date of award	Category
<b>No Data Entered/Not Applicable !!!</b>				



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### 3.3.3 – No. of Incubation centre created, start-ups incubated on campus during the year

Incubation Center	Name	Sponsored By	Name of the Start-up	Nature of Start-up	Date of Commencement
<b>No Data Entered/Not Applicable !!!</b>					
No file uploaded.					

### 3.4 – Research Publications and Awards

#### 3.4.1 – Ph. Ds awarded during the year

Name of the Department	Number of PhD's Awarded
CSE	1
Architecture	2

#### 3.4.2 – Research Publications in the Journals notified on UGC website during the year

Type	Department	Number of Publication	Average Impact Factor (if any)
National	Chemical Engineering	1	5
International	Civil Engineering	11	5
International	Mechanical Engineering/Automobile	17	3
International	Electrical Engineering	11	3
International	Electronics Engineering/ET	15	2
International	CSE/IT	44	2
International	Chemical Engineering	4	2
International	Applied Sciences	5	1
International	Humanities	1	4
<a href="#">View File</a>			

#### 3.4.3 – Books and Chapters in edited Volumes / Books published, and papers in National/International Conference Proceedings per Teacher during the year

Department	Number of Publication
Civil Engineering	13
Mechanical Engineering	6
Electrical Engineering	26
Electronics Engineering	5
Computer Science and Engineering/Information Technology	14
Applied Sciences	4
<a href="#">View File</a>	

#### 3.4.4 – Patents published/awarded during the year

Patent Details	Patent status	Patent Number	Date of Award
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A mobile phone charger with flexible mobile phone stand	Published	201921017792	17/05/2019
Low cost waste paper material pulping machine for recycling purpose	Published	201921029356	30/08/2019
Screw press machine to remove wet paper moisture in waste paper recycling purpose	Published	201921030743	30/08/2019
Machine for preparation of solid paper from pulp for waste paper recycle purpose	Published	201921030741	30/08/2019
Low cost solar water heater heater for use at remote location	Published	201921037524	11/10/2019
Low cost solar water heater to functioning during sun-off period using phase change material	Published	201921041635	06/12/2019

[View File](#)

3.4.5 – Bibliometrics of the publications during the last academic year based on average citation index in Scopus/ Web of Science or PubMed/ Indian Citation Index

Title of the Paper	Name of Author	Title of journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self citation
Preliminary evaluations on development of new materials for hip joint femoral head	Amit Aherwar, Amar Patnaik, Marjan Bahraminasab, Amit Singh	Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications	2019	28	MITs, Gwalior	13
Diagnosis and Classifications of Bearing	Pratesh Jayaswal Pavan Agrawal	Journal of The Institution of Engineers	2019	9	MITs, Gwalior	10

Faults Using Artificial Neural Network and Support Vector Machine		(India): Series C, <a href="https://doi.org/10.1007/s40032-019-00519">https://doi.org/10.1007/s40032-019-00519</a>				
Evaluation of Copper-Based Alloy (C93200) Composites Reinforced with Marble Dust Developed by Stir Casting under Vacuum Environment	Santosh Kumar Rajak, Amit Aherwar, Deepak Rajendra Unune, Mozammel Mia, Catalin I Pruncu	Materials	2019	83	MITS, Gwalior	9
An overview and comparative analysis of recent bio-inspired optimization techniques for wind integrated multi-objective power dispatch	Dubey, H.M., Pandit, M., Panigrahi, B.K.	Swarm and Evolutionary Computation	2019	51	MITS, Gwalior	21
<a href="#">View File</a>						

3.4.6 – h-Index of the Institutional Publications during the year. (based on Scopus/ Web of science)

Title of the Paper	Name of Author	Title of journal	Year of publication	h-index	Number of citations excluding self citation	Institutional affiliation as mentioned in the publication
Mechanical And Tribological Properties of	SkRajak, A Aherwar, C Pruncu	Materials Research Express	2020	27	1	MITS, Gwalior

Composite made of Marble Dust-Reinforced C93200 Copper Alloy						
Material Selection for Automotive Piston Component Using Entropy-VIKOR Method	Sanni Dev, Amit Aherwar, Amar Patnaik	Silicon	2020	21	24	MITS, Gwalior
Experimental Study of Sulphate Attack on Steel Embedded in Reinforced Concrete	Ashutosh S. Trivedi, S. S. Bhadauria And S. K. Jain	Journal of Institution of Engineers (India), Series A	2019	8	2	MITS, Gwalior
Evaluation of dynamic characteristics of RC Overhead Tanks	AnkeshBirrtharia, S. K. Jain And S. Tiwari	Journal of Structural Engineering, (Madras) (SCI SCIE)	2019	11	Nil	MITS, Gwalior
Comparative assessment of the contending force and placement models of weightless sagging cables	Pankaj Kumar, Abhijit Ganguli and Gurmail S. Benipal	Asian Journal of Civil Engineering	2019	18	Nil	MITS, Gwalior
<a href="#">View File</a>						

#### 3.4.7 – Faculty participation in Seminars/Conferences and Symposia during the year

Number of Faculty	International	National	State	Local
Attended/Seminars/Workshops	49	471	1	29
Presented papers	68	20	Nil	Nil
Resource	45	36	36	19

persons

[View File](#)

### 3.5 – Consultancy

#### 3.5.1 – Revenue generated from Consultancy during the year

Name of the Consultan(s) department	Name of consultancy project	Consulting/Sponsoring Agency	Revenue generated (amount in rupees)
Civil Engineering	Concrete Lab	Government and Private Organizations	293963
Civil Engineering	Soil Lab	Government and Private Organizations	222015
Civil Engineering	Highway Lab	Government and Private Organizations	1002178
Civil Engineering	Testing in SM Lab	Government and Private Organizations	383026
Electrical Engineering	Transformer other equipment related projects (21)	M/s The supreme industries Ltd., Malanpur and Government and Private Organizations	71352

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#### 3.5.2 – Revenue generated from Corporate Training by the institution during the year

Name of the Consultan(s) department	Title of the programme	Agency seeking / training	Revenue generated (amount in rupees)	Number of trainees
<b>No Data Entered/Not Applicable !!!</b>				

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### 3.6 – Extension Activities

#### 3.6.1 – Number of extension and outreach programmes conducted in collaboration with industry, community and Non- Government Organisations through NSS/NCC/Red cross/Youth Red Cross (YRC) etc., during the year

Title of the activities	Organising unit/agency/ collaborating agency	Number of teachers participated in such activities	Number of students participated in such activities
Extension and outreach programmes	Departments, NSS, Red Cross Others	118	1839

[View File](#)

#### 3.6.2 – Awards and recognition received for extension activities from Government and other recognized bodies during the year

Name of the activity	Award/Recognition	Awarding Bodies	Number of students Benefited
Contribution in the Field of Education	Medal on Teachers Day	District Administration	1

Contribution in the Field of Education	Presented with a Citation on Foundation Day of Madhya Pradesh-2019	Cabinet Minister	1
Contribution in the Field of Education and Plantation	Certificate of Honor on Republic Day-2020	Cabinet Minister	1
Work in plantation	Appreciation Certificate on Republic Day-2020	Cabinet Minister Shri Praduman Singh Tomar	1
No file uploaded.			

3.6.3 – Students participating in extension activities with Government Organisations, Non-Government Organisations and programmes such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the year

Name of the scheme	Organising unit/Agency/collaborating agency	Name of the activity	Number of teachers participated in such activities	Number of students participated in such activities
NSS	Gwalior Traffic Police, Gole ka Mandir	Traffic Road Safety Awareness Program	8	40
NSS	MITs with NSS Unit Jiwaji	MITs with NSS Unit Jiwaji	2	25
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### 3.7 – Collaborations

3.7.1 – Number of Collaborative activities for research, faculty exchange, student exchange during the year

Nature of activity	Participant	Source of financial support	Duration
Internship Recruitment Drive by Praedico Global Research Pvt. Ltd. New Delhi	UG (CSE & IT) and MCA Students	Institute	2
Industry Visit to Infosys Chandigarh	UG Students	TEQIP III	1
ACEDGE, Ethos platform	242	Institute	250
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3.7.2 – Linkages with institutions/industries for internship, on-the- job training, project work, sharing of research facilities etc. during the year

Nature of linkage	Title of the linkage	Name of the partnering institution/ industry /research lab with contact details	Duration From	Duration To	Participant
Industries	Project Work/ Internship/	Government Private Sector organ	15/07/2019	30/06/2020	304

	Training	izations (Details in enclosed file)		
<a href="#">View File</a>				

3.7.3 – MoUs signed with institutions of national, international importance, other institutions, industries, corporate houses etc. during the year

Organisation	Date of MoU signed	Purpose/Activities	Number of students/teachers participated under MoUs
Industries	15/07/2019	Industry visit, Training, Lab Development, Establishment of Excellence Centre, RD, Collaborative Activities, Joint Project, etc.	642
<a href="#">View File</a>			

## CRITERION IV – INFRASTRUCTURE AND LEARNING RESOURCES

### 4.1 – Physical Facilities

4.1.1 – Budget allocation, excluding salary for infrastructure augmentation during the year

Budget allocated for infrastructure augmentation	Budget utilized for infrastructure development
84477000	48385000

4.1.2 – Details of augmentation in infrastructure facilities during the year

Facilities	Existing or Newly Added
Campus Area	Existing
Class rooms	Newly Added
Laboratories	Newly Added
Seminar Halls	Newly Added
Classrooms with LCD facilities	Newly Added
Classrooms with Wi-Fi OR LAN	Newly Added
Seminar halls with ICT facilities	Newly Added
Video Centre	Newly Added
Number of important equipments purchased (Greater than 1-0 lakh) during the current year	Newly Added
Value of the equipment purchased during the year (rs. in lakhs)	Newly Added
Others	Newly Added
<a href="#">View File</a>	

### 4.2 – Library as a Learning Resource

4.2.1 – Library is automated {Integrated Library Management System (ILMS)}

Name of the ILMS software	Nature of automation (fully or partially)	Version	Year of automation

Koha	Fully	3.18	2014
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#### 4.2.2 – Library Services

Library Service Type	Existing		Newly Added		Total	
Text Books	94645	14196750	Nil	Nil	94645	14196750
Reference Books	9376	4219650	1	3500	9377	4223150
<a href="#">View File</a>						

4.2.3 – E-content developed by teachers such as: e-PG- Pathshala, CEC (under e-PG- Pathshala CEC (Under Graduate) SWAYAM other MOOCs platform NPTEL/NMEICT/any other Government initiatives & institutional (Learning Management System (LMS) etc

Name of the Teacher	Name of the Module	Platform on which module is developed	Date of launching e-content
Faculty - 144 (Listed in the enclosed file)	Modules - 272 (As listed in the enclosed file)	MOODLE/ZOOM/ GOOGLE MEET/ YOUTUBE/ WEBEX / SCREEN RECORDER	15/07/2019
<a href="#">View File</a>			

#### 4.3 – IT Infrastructure

##### 4.3.1 – Technology Upgradation (overall)

Type	Total Computers	Computer Lab	Internet	Browsing centers	Computer Centers	Office	Departments	Available Bandwidth (MBPS/ GBPS)	Others
Existing	1231	14	100	14	1	6	9	100	0
Added	75	1	1	1	1	0	1	1	0
Total	1306	15	101	15	2	6	10	101	0

##### 4.3.2 – Bandwidth available of internet connection in the Institution (Leased line)

100 MBPS/ GBPS
----------------

##### 4.3.3 – Facility for e-content

Name of the e-content development facility	Provide the link of the videos and media centre and recording facility
Lecture recording Studio Room	<a href="http://mitsgwalior.in/vmc.php">http://mitsgwalior.in/vmc.php</a>

#### 4.4 – Maintenance of Campus Infrastructure

4.4.1 – Expenditure incurred on maintenance of physical facilities and academic support facilities, excluding salary component, during the year

Assigned Budget on academic facilities	Expenditure incurred on maintenance of academic facilities	Assigned budget on physical facilities	Expenditure incurred on maintenance of physical facilities
5400000	5400000	118007000	98403000

4.4.2 – Procedures and policies for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc. (maximum 500 words) (information to be available in



? The Institute has established systems and procedures along with dedicated manpower for monitoring and to ensure proper maintenance and utilization of infrastructure, library, sports facilities, laboratories, classrooms, seminar halls, students activity centre etc. Following four maintenance cells are developed in the Institute: (i) Civil Maintenance Cell: Physical Infrastructure facilities like class rooms, Laboratories, Library, Sports complex, Computer Centre etc., are maintained internally by Civil Maintenance Cell of the Institute. Assistant Engineer, technical staff and time keeper etc., are appointed in the Institute. The Civil Maintenance Work is monitored by building committee of the Institute. (ii) Electrical Maintenance Cell: Institute has a separate Electrical Maintenance cell to ensure uninterrupted power supply and maintenance of electrical assets of 33 kv substation, Diesel Generator sets, lighting, power distribution system, solar panel etc. (iii) ICT Maintenance Cell: ICT maintenance Cell maintain the facilitates like, computers, LAN, internet, Wi-Fi and, MIS, LMS, CCTV security system, LCD projectors, ICT based Teaching learning facilities other ICT facilities and design through dedicated staff, Assistant registrar IT and in-charge ICT Maintenance Cell. (iv) General Maintenance Cell: The General maintenance cell is established to keep the campus hygienically clean, drinking water supply through dedicated staff. The maintenance of equipment's for water supply sets, sewage treatment etc. are undertaken as per standard maintenance schedule. Policies for utilization/Maintenance: ? Separate Complaint registers are maintained for various services like electrical, plumbing, housekeeping etc both for academic and hostel buildings. ? Minor work is carried out by labour and Artisans appointed on labour rates. ? Major maintenance work is carried out on contract through Annual Maintenance Contract System. ? All repair, maintenance and upkeeps of labs are maintained by their lab in-charges/technical staff. ? The utilization reports are maintained by In-charge Laboratory, HoDs, In-charge Maintenance Cell. ? The Advanced and Expensive Equipment are maintained through Annual Maintenance Contract (AMC). ? Equipment, instruments and appliances involved in the teaching-learning process are maintained through internal technical staff, service providers and AMC. ? The procurement of services through AMC, parts/components are procured through well established mechanism of purchase under the monitoring of Central Purchase committee. ? Periodic information/requirement of maintenance is submitted by HoDs/Section In-charge to concerning Maintenance Cell. ? Prior to commencement of New academic semester all teaching learning facilities including hostels and sports are maintained by concerning Maintenance Cell. ? Each laboratory has one faculty as Professor incharge lab, a Lab Assistant and attendant. Lab in-charge is responsible to maintain and upgrade the laboratory with necessary equipments from time to time to cope with change in the curriculum. Stock verification (Physical Verification) is carried out to verify working/nonworking/missing equipments etc. Yearly. Preventive maintenance and performance monitoring is carried out by concern lab--staff. Every laboratory staff keeps the record of utilization of equipments, computers and other required material for experiments. ? The Institute Central Library is maintained by the Librarian with dedicated library supporting staff. The library services like MIS, digital section, reference sections, Books issuing section, equipments and other library facilities are maintained regularly.

<https://mitsgwalior.in/NAAC/Procedures%20and%20policies%20for%20maintaining%20and%20utilizing%20physical.%20academic%20and%20support%20facilities.pdf>

## **CRITERION V – STUDENT SUPPORT AND PROGRESSION**

### **5.1 – Student Support**

#### 5.1.1 – Scholarships and Financial Support

	Name/Title of the scheme	Number of students	Amount in Rupees
Financial Support from institution	Nil	Nil	Nil
Financial Support from Other Sources			
a) National	Scholarship from M/s Smart Controls (I) Ltd.	2	90000
b) International	The International Berkeley Undergraduate Prize for Architectural Design Excellence	1	72000
<a href="#">View File</a>			

5.1.2 – Number of capability enhancement and development schemes such as Soft skill development, Remedial coaching, Language lab, Bridge courses, Yoga, Meditation, Personal Counselling and Mentoring etc.,

Name of the capability enhancement scheme	Date of implementation	Number of students enrolled	Agencies involved
Soft skill development, Remedial coaching, Language lab, Yoga, Meditation, Personal Counselling and Mentoring	25/07/2019	11185	Internal/external agencies listed in enclosed file
<a href="#">View File</a>			

5.1.3 – Students benefited by guidance for competitive examinations and career counselling offered by the institution during the year

Year	Name of the scheme	Number of benefited students for competitive examination	Number of benefited students by career counseling activities	Number of students who have passed in the comp. exam	Number of students placed
2019	GATE Coaching	486	Nil	138	Nil
2019	Employability Skills Training	Nil	1584	Nil	441
No file uploaded.					

5.1.4 – Institutional mechanism for transparency, timely redressal of student grievances, Prevention of sexual harassment and ragging cases during the year

Total grievances received	Number of grievances redressed	Avg. number of days for grievance redressal
12	12	7

## 5.2 – Student Progression

5.2.1 – Details of campus placement during the year

On campus			Off campus		
Name of organizations visited	Number of students participated	Number of students placed	Name of organizations visited	Number of students participated	Number of students placed
16	756	441	Nil	Nil	Nil
<a href="#">View File</a>					

#### 5.2.2 – Student progression to higher education in percentage during the year

Year	Number of students enrolling into higher education	Programme graduated from	Department graduated from	Name of institution joined	Name of programme admitted to
2019	6	B.Arch	Architecture	CEPET, SPA	M.Arch., M.Planning
2019	39	B.E.	All Engineering Department	IITs, NITs, IIITs, Central/State University, Other Engineering Collage	M.Tech., MBA
<a href="#">View File</a>					

#### 5.2.3 – Students qualifying in state/ national/ international level examinations during the year (eg:NET/SET/SLET/GATE/GMAT/CAT/GRE/TOFEL/Civil Services/State Government Services)

Items	Number of students selected/ qualifying
GATE	138
CAT	14
<a href="#">View File</a>	

#### 5.2.4 – Sports and cultural activities / competitions organised at the institution level during the year

Activity	Level	Number of Participants
Various Games Sports, Athletics and Cultural Events/ Activities	Institute level, State level, National, International	2310
<a href="#">View File</a>		

### 5.3 – Student Participation and Activities

#### 5.3.1 – Number of awards/medals for outstanding performance in sports/cultural activities at national/international level (award for a team event should be counted as one)

Year	Name of the award/medal	National/ International	Number of awards for Sports	Number of awards for Cultural	Student ID number	Name of the student
2019	Details enclosed in file	National	3	Nil	Details enclosed in file	Details enclosed in file
2020	Details enclosed in file	National	1	Nil	Details enclosed in file	Details enclosed in file

2019	Details enclosed in file	National	Null	5	Details enclosed in file	Details enclosed in file
2020	Details enclosed in file	National	Null	6	Details enclosed in file	Details enclosed in file
<a href="#">View File</a>						

5.3.2 – Activity of Student Council & representation of students on academic & administrative bodies/committees of the institution (maximum 500 words)

- Student representatives take part in the meeting of the Board of Studies
- All the student clubs in the institute are managed by student bodies.
- Student volunteers are assigned duties for the smooth conduction of campus placements.
- Group of students are nominated by the Heads of Department as OBE coordinators who help in dissemination of OBE related information.
- Gender Champions for establishing gender equity on campus are nominated by the class coordinators/ Heads of Department from each department, boys as well as girls.
- There are placement coordinators and volunteers for managing placement activities.
- Student representatives nominated to work as alumni
- Senior students works as mentors to junior students each senior student has 3 first year students to mentor.
- Student representatives are there in the anti ragging committee of the institute.
- There are class representatives in each class nominated by the class coordinators.
- Students are involved as office bearers in innovation cell and start-up cell.
- Two student representatives are members of the IQAC.

#### 5.4 – Alumni Engagement

5.4.1 – Whether the institution has registered Alumni Association?

Yes

? The Alumni is the most important resource that the institute has generated over its 60 years of existence. ? Alumni are adorning high positions in academic, government and corporate sectors there are many successful entrepreneurs also. ? The eminent and vast alumni pool has given the institute a name and standing in the country. ? Alumni association is very active and a number of activities are conducted every year. One Global alumni meet is conducted every year during the founder's day on 14th November. ? The alumni association is a big support for the institute. Recently the new Institute Gate was constructed from alumni funds. ? The meetings of the Alumni Association were held on 2.10.2019, 3.11.2019, 17.11.2019, 12.01.2020 and 15.3.2020 during year 2019-2020. ? In year 2019-2020 the "Industrial automation Excellence Centre" was established in the institute with alumni support. ? The Alumni Portal has been establishment for ease of alumni registration. It has been linked with Institute website for online registration and till date more than 3500 registered alumni are registered on-line. ? The alumni give valuable feedback to the institute on curriculum and other general issues. ? There are alumni coordinators in each department for the development of Alumni Forums and databases at the department level. ? The establishment of Alumni Interaction Committee to explore the possible initiatives for improvement in alumni interaction/participation. ? Some of the evidences of Alumni involvement in the institute are as follows:

- o Annual Alumni meet has been a constant ritual for the last many years.
- o Usually the 'silver jubilee celebrations' are also conducted by the batch completing 25 years of their graduation.
- o During the 'Golden Jubilee' 'Diamond Jubilee Celebration' of the institute a large number of alumni visited the institute from all over the globe. Their bonding and connection with the institute was quite visible.
- o There are a number of scholarships initiated by the alumni for supporting students who are

meritorious and from economically weaker sections of the society. o The alumni help in internships and job placements. o The alumni help in organizing industrial visits and in strengthening industry-institute interaction. o The representatives of the Alumni are there in (i) BoG (ii) IQAC and (iii) BoS and (iv) Anti ragging committees o Initiative was taken by the IQAC for creating a database at the department level Alumni Coordinators were appointed in each department for enhancing interaction, conducting meetings, preparing database, collecting feedback from alumni etc. ? Civil - Prof. Deepak Rastogi ? Mechanical - Prof. Sharad Agrawal ? Electrical - Prof. Vijay Bhuria Prof. Praveen Bansal ? Electronics - Dr. R.P. Narwariya ? CSE/IT - Prof. Rajeev Kumar Singh ? Chemical - Prof. Swati Gupta ? Architecture - Ar. Pranshi Jain o The institute has allotted separate space for the office of the alumni association.

5.4.2 – No. of registered Alumni:

4001

5.4.3 – Alumni contribution during the year (in Rupees) :

330000

5.4.4 – Meetings/activities organized by Alumni Association :

Main Activities of Executive of MITS Alumni Association during July 2019 to July 2020 : ? Regular Meetings of Executive of MITS Alumni Association held on 02/10/2019, 03/11/2019, 17/11/2019, 12/01/2020. ? All information's regarding association activity and members activity, achievement and progress is being communicated to all members through e-mail, Facebook, LinkedIn, etc. The email communication is held under the name of CHOUPAL. ? All accounts are placed before executive and General body and are passed under policy. The accounts are audited by CA Mayur Garg. ? Special Meetings are being organized for Holi Diwali Milan. ? Annual meeting and get together has been organized at Hotel Regency Square and Alumni with family participated. ? Efforts are made to organize sub centre in various cities to perform. Alumni activity and get together at various city level, Participation may be focused on city and its vicinity. ? Discussions were held to help Institute with practical work and development. This was arranged with knowledge of Alumni working in various organization, as on doing individual entrepreneurship, ? Help to few students has been provided in Cash for depositing the Fees of MITS. This fund was raised by contribution from Member. This executed through association and directly through MITS. ? The MITS Alumni Association operates from its permanent office located in MITS Campus. ? Association has taken care of the family of Alumni residing at Gwalior and Alumni serving in abroad or any other city. ? Association has also taken care of the Retd. staff in city and maintain good relation and contact with them. ? Helping each other in getting help technically or commercially. ? Giving opportunity for training, placement and updating to student of institute .

## **CRITERION VI – GOVERNANCE, LEADERSHIP AND MANAGEMENT**

### **6.1 – Institutional Vision and Leadership**

6.1.1 – Mention two practices of decentralization and participative management during the last year (maximum 500 words)

- Powers are given to Class Coordinators of each class to ensure decentralization of all processes. The class coordinators monitor records of attendance, student leaves, forwards the various documents applications of students and gives final permission for appearing in examination. • The proctors and deans have specific well defined duties and they can issue orders concerning to issues in their respective domains. • For each initiative taken by the IQAC separate coordinators are appointed at the department level to help

in administration of the different activities such as - ? OBE coordinator monitors and takes care of all documentation related to COs and their attainment through direct and indirect assessment, development of rubrics, computation of POs/PEOs, setting of targets, corrective actions after gap analysis, question paper analysis on the basis of LOTS/HOTs Bloom's Taxonomy etc. ? Coordinator for remedial/bridge classes. ? MOODLE coordinator has the responsibility to monitor uploading of learning material on MOODLE and to facilitate effective utilization of the MOODLE for Quiz, Feedbacks assignments etc. ? Web coordinator for departmental webpage management, updating and for providing all relevant information like list of COs, POs, PEOs, Vision, Mission etc. on the departmental web page. ? Coordinator for departmental e-Newsletter where all the activities and achievements are posted. ? Coordinator for feedback collection, proper analysis and corrective action. ? Coordinators for SWAYAM/MOOCs take steps to popularize the online courses among students, create awareness and help them in selecting online electives. They also monitor the SMEs and keep records of all data. ? Internship coordinator for enhancing and managing industry interaction, arranging in-house internships for I II year students, guiding students for career, arranging internship placements etc. ? Alumni coordinator for enhancing and managing alumni interaction. ? GATE Coordinator for procuring services for the activity and for smooth conduction of the GATE classes. ? Time-table coordinator for preparation of time table and for monitoring all issues/complaints regarding time-table if any. ? Plagiarism administrator has the responsibility to check the BE major/minor project reports, ME/M.Tech dissertation files before allowing for pre submission viva and presentation.

6.1.2 – Does the institution have a Management Information System (MIS)?

Yes

## 6.2 – Strategy Development and Deployment

6.2.1 – Quality improvement strategies adopted by the institution for each of the following (with in 100 words each):

Strategy Type	Details
Curriculum Development	<p>? Flexible Scheme/curriculum based on the AICTE model curriculum is in place.</p> <p>? Provision of Honours /Minor specialization in parent/ allied disciplines ? Provision of mini/minor projects and full semester internship/ Major project. ? Provision of 02 credits for involvement in co-curricular activities such as sports, technical events, dance, any other achievement through Professional Development component ? The meeting of the BoS is twice a year for o Proposing departmental Electives/Open Elective courses o Approving electives from NPTEL/SWAYAM/MOOCs for credit transfer o Proposing list of additional courses under minor specialization in allied disciplines o Proposing list of additional courses for Honours in the parent discipline Reviewing the Course Outcomes their attainment and setting targets/corrective actions after gap analysis o Revisions in courses o Introduction of new courses as per the</p>

	<p>industry demand</p> <ul style="list-style-type: none"> <li>o Introduction of courses - enhancing employability and skill</li> <li>o Curricula feedback taken from all stakeholders</li> </ul>
Teaching and Learning	<p>? Credit transfer from NPTEL is done to make the students self-learners ? Interactive teaching group learning is being promoted through group presentations. ? Smart class rooms with interactive panels, projectors, PA system are available permitting faculty to use modern instruction tools, PPTs, Video Clips etc. ? The notes and study material, question banks etc are uploaded on the institute MOODLE. ? On-line evaluation and quiz are carried out using MOODLE. ? Feedback mechanism is effectively used for improving teaching-learning ? Feedback on course content taken twice a year along with course outcome feedback.</p>
Examination and Evaluation	<p>? Examination reforms are implemented in the institute. ? Question papers are set based on Bloom's taxonomy. ? Digital valuation implemented/valued answer books shown to the students. ? On-line question paper feedback collected lines opened for 24 hours after the examination. ? Guidelines prepared for conducting MCQ based quizzes on MOODLE for continuous assessment ? Some courses such as drawing, design, projects, workshops, software/programming based courses etc.were evaluated using 'AssignmentOral' mode. ? During COVID examinations were conducted in open book mode using MOODLE ? Eligibility for completion for Final Year Major Project course was submission of one paper in journal/conference.</p>
Research and Development	<p>? Seed money given to faculty members under the Innovative Research Scheme. ? Research proposals for financial assistance submitted to external funding agencies. Funds received under RPS scheme. ? Publication of one paper in international conference/journal mandatory for accepting PG dissertations. ? Two International Conferences on sustainability theme conducted in collaboration with reputed organizations proceedings published as Book Chapters ? Policy exists for financial assistance to faculty/students for attending conferences within Indiaabroad. ? Six</p>

monthly progress review of PhD scholars by the Research Advisory Committee (RAC) ? Faculty members are encouraged to attend/conduct short-term courses, workshops, conferences

Library, ICT and Physical Infrastructure / Instrumentation

? The library is equipped with e-books and separate space for digital library. ? MOOC Development Centre is established in the institute. MOOC development process has also started by the institute faculty. ? In library there is RFID installed for efficient management. ? All class rooms are equipped with ICT facilitates. Digital tablets, zoo/google meet etc platforms are used for interactive classes ? Cameras are installed throughout the campus for monitoring activities in the institute and for security purposes. New basketball court is ready and cricket stadium is under development stage.

Human Resource Management

? API based assessment for faculty members ? Numeric model for appraisal of staff ? Career Advancement Schemes implemented according to the state and AICTE norms ? Faculty members are encouraged to enroll/complete their PhD. Leaves and other support is granted as per norms. ? Clearly defined policies on career advancement and annual appraisal in place. ? Written documents on duties and responsibilities of staff, faculty members, various coordinators, HoDs and Deans are available. ? There is transparency in leave rules, duty leaves deputation for academic/non academic/examination work etc. ? Personnel files are maintained with all previous records.

Industry Interaction / Collaboration

? Industrial Automation Excellence Centre established in collaboration with M/s Smart Controls India Ltd ? The training Placement Cell frequently organizes Industry Conclave to facilitate and enhance interaction with industry. ? Industry representatives are members in the BoG, IQAC and BoS. ? Faculty coordinator in each department for managing the industry collaboration ? MoUs with industries for internship of students, industry visits ? Expert lectures by industry personnel, joint guidance of student projects etc. ? Industry collaborated elective courses ? 'TedX-MITS-G' was organized on 25th



January 2020

**Admission of Students**

? Admissions are through Joint Entrance Exam (JEE)-Mains-I II for B.Tech./B.Arch. NATA for B.Arch. ? Students of other states are admitted through Central Seat Allocation Board (CSAB) of Government of India ? Foreign students are admitted through Ministry of External Affairs (GOI) Quota ? The admission for UG/PG students is online through state level counseling managed by the Directorate of Technical Education (DTE) of the state. ? All admissions are done according to the guidelines of the State and the Central Government Norms

6.2.2 – Implementation of e-governance in areas of operations:

E-governance area	Details
<p><b>Planning and Development</b></p>	<p>? The faculty recruitment drive is managed through the institute website. ? All academic and other guidelines, policies and notices are disseminated through e-mails and website. ? All the tender notices are floated on the institute website. ? Links for all forms and formats can also be accessed through the website. ? The submission of these documents is also on-line through institute portal. ? The institute development plans along with minutes of all meetings is available on the website for all stakeholders.</p>
<p><b>Administration</b></p>	<p>? Registration of students is online through IMS ? All the notices are sent through e-mails. ? All internal communication between departments, documentation and reports are through e-mail. ? Daily attendance in through digital platform, the MITS-MOODLE.</p>
<p><b>Finance and Accounts</b></p>	<p>? All financial transactions are online, such as o fee deposition by students, o payments for procurement of equipment and services, o reimbursements of scholarships, o honorarium to experts o salaries ? The accounts are managed through software. ? There are no cash transactions in the institute.</p>
<p><b>Student Admission and Support</b></p>	<p>? Admissions are through centralized counseling on DTE portal. ? All notices, formats, forms, guidelines are available on website. ? Communication with students for placement and other purposes is through e mails or MOODLE.</p>

<b>Examination</b>	? From examination form submission to result declaration, all the processes are on-line through IMS. ? Due to COVID, now the examinations (mid-term/end-term, practical viva-voce, project/seminar presentations etc) are also online ? Valuation, feedback on question paper etc is also on-line in digital form. ? Queries, applications, revaluation requests are entertained online
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### 6.3 – Faculty Empowerment Strategies

6.3.1 – Teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the year

Year	Name of Teacher	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support
2019	As enclosed in the file	As enclosed in the file	As enclosed in the file	876537
<a href="#">View File</a>				

6.3.2 – Number of professional development / administrative training programmes organized by the Colleges for teaching and non teaching staff during the year

Year	Title of the professional development programme organised for teaching staff	Title of the administrative training programme organised for non-teaching staff	From date	To Date	Number of participants (Teaching staff)	Number of participants (non-teaching staff)
2019	As provided in the enclosed file	As provided in the enclosed file	01/07/2019	30/06/2020	797	314
<a href="#">View File</a>						

6.3.3 – No. of teachers attending professional development programmes, viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes during the year

Title of the professional development programme	Number of teachers who attended	From Date	To date	Duration
Sustainability of Water Resources System Management	1	19/06/2020	20/06/2020	2
Cloud Data Structure Infrastructure	1	18/05/2020	20/05/2020	3

Online FDP on Advances in Civil and Structural Engineering	2	12/06/2020	16/06/2020	5
Online FDP on Technologies for Infrastructure Planning, Design, Monitoring Management	1	16/06/2020	20/06/2020	5
<a href="#">View File</a>				

#### 6.3.4 – Faculty and Staff recruitment (no. for permanent recruitment):

Teaching		Non-teaching	
Permanent	Full Time	Permanent	Full Time
Nil	57	Nil	Nil

#### 6.3.5 – Welfare schemes for

Teaching	Non-teaching	Students
<ul style="list-style-type: none"> <li>• Personal Counselling</li> <li>• Medical Facility</li> <li>• University Welfare Scheme</li> <li>• Schemes as per MP Govt. Norms</li> <li>• Group Insurance</li> </ul>	<ul style="list-style-type: none"> <li>• Personal Counselling</li> <li>• Medical Facility</li> <li>• Schemes as per MP Govt. norms</li> <li>• Group Insurance</li> </ul>	<ul style="list-style-type: none"> <li>• Personal Counselling</li> <li>• Medical Facility</li> <li>• Financial support under TEQIP-III for participation on seminar, conferences.</li> <li>• Training Internship support for employability, higher education etc.</li> <li>• Conduction of awareness development programs for students overall development</li> </ul>

### 6.4 – Financial Management and Resource Mobilization

#### 6.4.1 – Institution conducts internal and external financial audits regularly (with in 100 words each)

<ul style="list-style-type: none"> <li>• The Institute is Grant-in-Aid of M.P. Govt. and receives Annual Block Grant from the State of Madhya Pradesh. Other financial resources are mobilized through Fee collection from the Students for various programs running in the Institute.</li> <li>• Over and above, the Research Grant as well as Modernization of Laboratory Grants are received annually from AICTE, New Delhi, DST, UGC and like bodies of Government of India.</li> <li>• There is a Resident Auditor of Govt. of Madhya Pradesh and the Pre-auditing system exists in the Institute. However Post Audit is conducted by Office of the Accounts General, Govt. of India periodically.</li> <li>• Presently TEQIP-III funds are being audited by Auditor appointed by SPIU, Bhopal at the State Level NPIU, New Delhi (MHRD) at the National Level.</li> <li>• Funds received from Management and other Government bodies, individual etc., are audited by Chartered Accountant appointed by the Society/Board of Governors of the Institute.</li> </ul>
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#### 6.4.2 – Funds / Grants received from management, non-government bodies, individuals, philanthropies during the year(not covered in Criterion III)

Name of the non government funding agencies /individuals	Funds/ Grnats received in Rs.	Purpose
Debangshu Chakrabarty	1000000	Lab Development
No file uploaded.		

6.4.3 – Total corpus fund generated

20000000
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## 6.5 – Internal Quality Assurance System

6.5.1 – Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	Yes	External Expert Committee	Yes	Audit Committee
Administrative	No	Nil	Yes	Audit Committee

6.5.2 – Activities and support from the Parent – Teacher Association (at least three)

<ul style="list-style-type: none"> <li>• Parent-Teacher meeting twice a year.</li> <li>• Feedback Collection from parents twice a year.</li> <li>• Participation in institute welfare activities</li> </ul>
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6.5.3 – Development programmes for support staff (at least three)

<ul style="list-style-type: none"> <li>• MOODLE training</li> <li>• One Administrative Development Programme per year. (In-house)</li> <li>• One Technical Training per year. (In-house)</li> <li>• Need based domain specific trainings. (External)</li> </ul>
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6.5.4 – Post Accreditation initiative(s) (mention at least three)

<ul style="list-style-type: none"> <li>• Credit transfer through SWAYAM/NPTEL/MOOCs to establish a culture of self-learning</li> <li>• Establishment of MOOC Development Centre</li> <li>• Development and implementation of Flexible curriculum</li> <li>• Development of "Administrative Efficiency Index" (AEI) for overall improvement</li> <li>• Digitization of Examination</li> <li>• Conduction of Finishing School Programmes for III IV year students</li> <li>• Conduction of In-house Summer Internship Programme For I II.</li> <li>• Establishment of Numerical Index based Feedback and Assessment</li> <li>• Implementation of Bloom's Taxonomy for Mid-Term and End-Term Assessment</li> <li>• Induction Programme for I Year</li> <li>• Conduction of Value Added Courses</li> <li>• Development of Smart Class Rooms</li> </ul>
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6.5.5 – Internal Quality Assurance System Details

a) Submission of Data for AISHE portal	Yes
b) Participation in NIRF	Yes
c) ISO certification	No
d) NBA or any other quality audit	Yes

6.5.6 – Number of Quality Initiatives undertaken during the year

Year	Name of quality initiative by IQAC	Date of conducting IQAC	Duration From	Duration To	Number of participants
2019	As enclosed in file	24/08/2019	01/07/2019	31/12/2019	1412
2020	As	03/03/2020	01/01/2020	30/06/2020	448

enclosed in  
file

[View File](#)

## CRITERION VII – INSTITUTIONAL VALUES AND BEST PRACTICES

### 7.1 – Institutional Values and Social Responsibilities

7.1.1 – Gender Equity (Number of gender equity promotion programmes organized by the institution during the year)

Title of the programme	Period from	Period To	Number of Participants	
			Female	Male
Workshop on 'Know Your Rights'	12/09/2019	12/09/2019	67	252
A one week panel discussion program on 'Good Career Women'	27/01/2020	31/01/2020	131	351
An awareness program on personal hygiene	16/10/2019	16/10/2019	35	Nil
A workshop on "Equity at Workplace"	07/03/2020	07/03/2020	53	4
Poster Making Competition (online) on "Naari- the Aadi Shakti in Pandemic"	19/06/2020	25/06/2020	9	1

7.1.2 – Environmental Consciousness and Sustainability/Alternate Energy initiatives such as:

#### Percentage of power requirement of the University met by the renewable energy sources

? About 30 percent of the institute load is supplied from the renewable energy.  
? The institute has a 100kWp rooftop solar power plant installed under the RESCO scheme. ? The solar plant became functional w.e.f. November 2019. ? The total energy generated by the solar plant during year 2020 is as shown. ? Total 1,19,445.9 Kg (approximately) of CO2 Emission was reduced from the atmosphere in 2019-2020 due to the installation of the rooftop solar PV plant. ? Board of Governors of the Institute has approved the Environmental Sustainability Plan for the Institute in its meeting held on 30.11.2019 vide item No.6 and the same is implemented in stage wise manner. ? Key highlights of action taken for the implementation of Environmental Sustainability Plan: ? Development, Implementation Monitoring of Environment Management Plan. ? Conduction of Environment Audit per year and necessary corrective measures accordingly. ? Clean and safe water facilities through installed Reverse Osmosis (ROs) purifiers. ? Sewage Treatment Plant has been installed. ? Compost makers for dry wet Biodegradable wastes are installed. ? Waste-to-compost plants have been installed. Conversion of waste to compost has been started. ? Sufficient number of clean, safe and hygienic sanitation facilities in the campus. ? Solar Plant

has been installed and capacity will be increased through financial support from government. ? Promoting Collaborative research activities on renewable and clean energy like solar energy. ? Providing guidance and support to society for application of affordable energy. ? Working in Collaboration with industries for innovative and sustainable solutions for society. ? Educating stakeholders for Green Sustainable developments through Workshops, Counselling etc. ? Developing and maintaining infrastructure through sustainable low-cost methods and technologies. ? Improvement of green infrastructure in campus by amplifying green areas after consulting horticulture experts. ? Preservation of forests inside the campus upto 23 of existing land area. ? Enhancing use of digital mode, reducing power paper consumption waste management. ? Initiatives are taken for recycling the generated waste ? Initiatives are taken for Generation of power through smart grids. ? Moving towards zero energy buildings. ? Reduction in waste generation within the campus. ? Plastic free campus. ? Segregation of waste generated in different bins like glass, plastic, wet, dry and construction. ? Awareness Camps for low Carbon foot prints. ? Promoting Ecological Conservation in Campus. ? Implemented Mandatory policy for Water Conservation (Conduction of Water Audit, Rain Water Harvesting, Auto shutoff valve in overhead tanks, Reuse of water after treatment etc.) ? Promoting Energy, Conservation (LED Lighting and Fixtures, Solar installation (on grid and off grid), Auto shutoff switches in rooms corridors and common areas, solar water heaters, etc).

#### 7.1.3 – Differently abled (Divyangjan) friendliness

Item facilities	Yes/No	Number of beneficiaries
Physical facilities	Yes	4
Provision for lift	Yes	4
Ramp/Rails	Yes	4
Rest Rooms	Yes	4
Any other similar facility	Yes	4

#### 7.1.4 – Inclusion and Situatedness

Year	Number of initiatives to address locational advantages and disadvantages	Number of initiatives taken to engage with and contribute to local community	Date	Duration	Name of initiative	Issues addressed	Number of participating students and staff
2019	Nil	6	13/07/2019	6	Details enclosed in File	Listed in File	928

[View File](#)

#### 7.1.5 – Human Values and Professional Ethics

Title	Date of publication	Follow up(max 100 words)
Policy on Academic Ethics	24/08/2019	The policy document is circulated to all faculty, students staff of the institute through a Google form, with a "I have read and I accept to

abide by these guidelines" at the bottom, compulsory for all to accept.

Policy on Plagiarism

01/06/2019

• The Institute has procured "Turnitin" plagiarism check software and it is accessible to all the stakeholders of the Institute. Moreover, at each department, one faculty member has been designated as "Turnitin Administrator" to create awareness, to train others and to handle issues, if any. • In compliance to UGC Guidelines, a Departmental Academic Integrity Panel (DAIP) has been constituted. In addition, Institutional Academic Integrity Panel (IAIP) has also been constituted which will consider the submissions/recommendations of DAIP. Permit up to 15-20 overall similarity index as acceptable (using turnitin plagiarism check software) provided that the highest similarity percentage from any one source is not greater than 4-6. In case of self plagiarism, the permissible percentage may be slightly higher, say at 7-10 .

7.1.6 – Activities conducted for promotion of universal Values and Ethics

Activity	Duration From	Duration To	Number of participants
Plantation and Yoga Program	25/08/2019	25/08/2019	100
"Yoga Session" for the first year students	25/08/2019	25/08/2020	200
"Art of Living -SELP" (Student Excellence and Learning Program)	26/08/2019	31/08/2019	900
Swachchhata Abhiyan	02/10/2019	02/10/2019	87

Vigilance Awareness	01/11/2019	01/11/2019	43
Self Defense Workshop-MPOWR	24/02/2020	28/02/2020	60
<a href="#">View File</a>			

#### 7.1.7 – Initiatives taken by the institution to make the campus eco-friendly (at least five)

- Green Power: There is a 100kWp rooftop solar power plant which saves about under the RESCO model due to which 1,19,445.9 Kg of CO2 emission has been curtailed in a year.
- Rain water harvesting: In the MITS campus 12 rain harvesting pits with bore pipe have been created for conserving the rain water for maintaining the water level of the area in particular and city in general.
- Tree plantation: The institute is committed to have a green campus. There are large number of old trees and green spaces, lawns etc. Every year plantation is done to increase the forest area. About 78 of the campus area is green (58) or open (20).
- Sewage Treatment Plant: Initiatives were taken for recycling the generated waste by installing the STP and recycling the waste water for gardening and in toilets.
- Compost Plant: There are two large compost pits in the campus where organic waste is deposited and converted to compost for use in the gardens. In addition to this mechanical conversion of waste to compost has also been started by installing Compost makers: 02 in numbers.
- Digital office working : Reduction in waste generation within the campus by going digital, paperless working with the use of digital communication and MIS.
- Use of non-biodegradable items is banned in the campus
- Segregation of waste generated in different bins like glass, plastic, wet, dry and construction.
- The various clubs and NSS unit of the institute conduct awareness about eco-friendly campus.

## 7.2 – Best Practices

### 7.2.1 – Describe at least two institutional best practices

**BEST PRACTICE -1**

1. Title: 'Administrative Efficiency Index' for overall improvement
2. Objectives of the practice : To ensure compliance of quality standards, the institute has identified many activities and set their timelines. The objective the numeric 'Administrative Efficiency Index (AEI)' is: ? To increase the effectiveness of teaching-learning-evaluation, other student centric initiatives and stakeholder participation ? To ensure timely completion of all planned routine academic other activities such as curriculum development, alumni/industry connect, student counselling/mentoring, assessments, various feedbacks their analysis, PTM etc. ? To quantify the performance in order to encourage timely completion/submission of documents/reports/information by various departments/cells of the institution ? To Internalize all the processes forestablishing quality culture in the institute.
3. The Context : ? The activity timelines were prepared and circulated by the Academic Development Cell of the institute in 2018. ? The effective monitoring of the ten departments of the institute for about 30 parameters was difficult. Also, there was a need to fix the accountability of various activities to ensure timely and effective completion. ? The IQAC in its meeting on 30th November 2019 decided to develop a numeric 'Administrative Efficiency Index' to quantify the performance of the various departments. ? The idea was to generate healthy competition, motivation and to encourage effective timely completion of all assigned activities by faculty members across the departments in order to make sure that their department gets a good AEI score for the semester. ? Hence, this year the AEI was centrally computed and the results were analysed to identify exactly where and why the delays have occurred and what corrective steps can be taken in future.
4. The Practice : ? In each semester, about 30 activities/parameters/factors were identified and



listed. Each parameter clearly mentions the o Task to be completed in a particular department o The faculty/staff/coordinators who are assigned to complete that task o The frequency of the activity (whether once/twice in a semester etc) o The deadline for completion of activity and submission of report ? Some of these parameters change from semester to semester due to changes taking place in policies, curriculum, academic calendar etc. ? Therefore, in the beginning of the semester, the above details are shared with all the departments and sections so that they have a clear picture of their targets and they get sufficient time to plan, schedule, assign, distribute and execute their respective activities within the specified time frame, in an efficient manner. ? The AEI is computed such as to reflect the performance of each department for each of the activities/parameters/factors on a scale of 10.

? The criterion used for awarding points against each activity for the computation of AEI is given below: o Excellent (if activity is completed on the deadline) 10 points o Very Good (if activity is completed after 2-4 days) 7 points o Good (if activity is completed after 5-7 days) 5 points o Average (if activity is completed after 8-10 days) points3 o Below Average (if activity is completed after 11-15 days) points1 o Activity Not Done even after 15 days 0 points ? Points are awarded to each department based on the above criterion, for each activity. ? At the end of the semester, the 'Administrative Efficiency Index (AEI)' is computed out of 10. ? The AEI reflects the overall performance of the department in completing all the routine activities and submitting timely reports for institute level records and documentation. ? Some of the activities/reports included for AEI computation are: o Conduction of orientation programme at the beginning of the session o Student/other stakeholder feedback on curriculum o Uploading quarterly departmental newsletter o Counselling sessions for students o Report of PhD scholars' six monthly review ? The list of parameters and details of computation are enclosed as Annexure. 5. Evidence of Success :

? The AEI was computed for the 10 departments on the basis of their performance for the 30 parameters/activities/factors (scheduled in the beginning of the January-June 2020 semester). ? Similarly, for the next semester, the AEI was computed for 37 parameters/activities /factors. ? The AEI indices of the 10 departments for the two successive semesters Jan-June 2020 July to December- 2020 were compared and shown in the Table below. ? It can be seen than out of 10, for the 7 departments, the AEI improved. It is a clear indication that the practice is encouraging faculty members to complete activities in a timely manner with better adherence to previously announced deadlines. (The 3 departments where there was fall in AEI were going through some administrative and other changes like reorganization of the administrative structure etc.) ? The documentation and all activities are conducted smoothly and compilation of reports has become very easy now. ? Earlier, frequent reminders were required. Now, the AEI practice has made all the concerned persons more responsible. ? So far, only two reports are available in future it is expected that the quantification of performance of the department (AEI) will improve further. 6. Problems

Encountered and Resources Required : ? The practice does not require any additional infra structure as the institute already has good wi-fi, internet facility and computational facilities. ? In fact, at the central level it has now become easier to compile all the information and monitor the academic and other processes. ? No problems as such are encountered because everybody is happy due to the transparent, structured and well defined mechanism which is laid down with clear guidelines, instructions, and formats. BEST PRACTICE-2 1. Title: MOODLE WORKING INDEX (MWI) for monitoring the status of digital teaching-learning. 2. Objectives of the practice : The MOODLE completed two years but some faculty were still hesitant in using this platform. The MOODLE Working Index (MWI) was developed to encourage/enhance the use of digital-dynamic, teaching-learning-evaluation activities to permit student centric "any-time, any-where' format of learning. The idea was: ? To periodically monitor and

quantify the MOODLE use of faculty of each department. ? To make faculty members familiar and friendly with MOODLE for the benefit of both faculty as well as students. ? To identify poor performing department/faculty and take corrective actions for familiarizing them with MOODLE ? To create awareness/fix responsibility of increasing MOODLE use

3. The Context : ? The MITS-MOODLE was launched on 15th August 2017 for providing an e-learning environment for interactive teaching-learning-evaluation. ? It was noticed that students were not able to take notes in the classes and therefore was a lot of their valuable time in searching relevant content on the internet. ? Numerous sessions were conducted for creating awareness about effectiveness of MOODLE in e-learning/blended teaching/flipped classes etc.

4. The Practice : ? At the beginning of the semester the course mentors start their respective course pages, enter the course(s) being taught, add the syllabus, COs and other learning material. ? Then the faculty add the students for completing the academic interaction circle so that the course mentor gets connected with all students and vice versa through the MOODLE. ? Ten activities related to each course have been identified for monitoring. The activities are

- o To starting the coursepage on MOODLE
- o To create course wise student groups
- o To mark attendance
- o To enter Course Outcomes (COs) for all courses
- o To enter syllabus for all courses
- o To enter detailed lecture plan
- o To prepare and upload course wise Question Banks
- o To prepare upload course files (consisting of PPT, Lecture Notes, tutorial questions, Study material, names of Reference Books etc)

? The MWI is computed department wise by taking a weighted average of the following 3 categories

- o Poor (number of faculty using three or less out of the above listed ten features)
- o Good (number of faculty using more than three but less than eight out of the ten features) and
- o Excellent (number of faculty using more than five out of the ten features).

? The three categories, Poor, Good Excellent were assigned weights of zero, five and ten respectively. ? For example, if there are Z number of total faculty members in a department out of which A are in category 'Poor', B are in category 'Good' and C are in category 'Excellent', based on their usage of the ten MOODLE features, then the MWI can be calculated as  $MWI = \frac{(A \times 0) + (B \times 5) + (C \times 10)}{Z}$ .

5. Evidence of Success : ? The circulation of the department wise MWI thrice a semester was a huge success. ? The MWI created a healthy competition between departments and previously non-active course mentors too realized that their non-performance was bringing down the MWI of their department. ? Once the initial hesitation was overcome, the faculty started enjoying this experience of e-teaching-learning.

6. Problems Encountered and Resources Required : ? There were no problems encountered and no as the institute had prepared a proper action plan for making digital learning popular among the faculty members. ? There are total 6029 active users on MITS-MOODLE out of which 5729 are students, 224 are faculty and 76 are staff members.

Upload details of two best practices successfully implemented by the institution as per NAAC format in your institution website, provide the link

<http://mitsgwalior.in/IOAC/MITS-BEST-PRACTICES.pdf>

### 7.3 – Institutional Distinctiveness

7.3.1 – Provide the details of the performance of the institution in one area distinctive to its vision, priority and thrust in not more than 500 words

? The institute is committed to prepare "Future Ready" students, who can survive in this fast changing world due to their self-learning abilities. ? The faculty was also motivated to earn certificates from the SWAYAM/NPTEL platform to update their teaching skills and domain knowledge through courses offering latest knowledge. ? With this in view, the institute launched its self-learning initiative by starting "NPTEL Local Chapter" in August 2017. The idea was

- o to motivate students for becoming self-learners
- o to conduct on-line classes using

the NPTEL portal to create awareness one SWAYAM manager and a team of ten SWAYAM coordinators were appointed in October 2017. Institute is a pioneer in the region in starting this initiative which facilitated students to learn from renowned national experts from premier institutions. Since then, the MITS NPTEL Chapter has continuously been ranking in top 100 chapters of the nation. To prepare students to earn certificates and opt for "credit transfer from MOOCs", since January 2018, one SWAYAM/NPTEL course was conducted against the self-study/seminar slot. (Registration is mandatory appearing for on-line exam/certification is optional) Detailed evaluation guidelines were prepared for the same by the team of SWAYAM coordinators. The following evaluation guidelines were employed: a. Continuous evaluation by the teacher(s) of the course through (Seminar/Presentation/Group assignments) (Weightage of Marks: 40) b. Evaluation through ONE Midterm Exam (Weightage of Marks: 20) c. ONE Quiz through Institute MOODLE (Weightage of Marks: 20) d. Monitoring and record of attendance (Weightage of Marks: 20) The performance of the MITS NPTEL Chapter has been exemplary since then. National rank during January-May 2018: 87th National rank during July-December 2018: 25th National rank during January-May 2019: 46th National rank during July-December 2019: 31st In July-December 2020 the MITS NPTEL Chapter excelled with 1st rank in Madhya Pradesh and 13th in top 100 chapters among 4000 active local chapters across country. Credit transfer from MOOCs has been successfully done since June 2020 An active MOOC (Massive Open Online Courses) Development Centre has also been established in the institute with latest recording facilities and editing softwares. The Institute has drafted a policy in line with the AICTE model curriculum guidelines and implemented the 'credit transfer from MOOCs' w.e.f. June 2020 passing out undergraduate batch after approval in the Academic Council of the Institute. Departmental Electives (DEs) and Open Category (OC) Courses through SWAYAM / NPTEL / MOOC learning based platforms with credit transfer facility are offered from 6th Semester onwards. By earning 20-additional credits from the self learning platforms, the students will be eligible to get a "Minor Specialization" in allied disciplines. Status of Credit Transfer No. of students offered online courses for which credits have been transferred to their transcript: 777 Total no. of online courses in which credits have been transferred to the transcript: 182 Total no. of credits transferred to transcript till June 2020: 2824

Provide the weblink of the institution

<http://mitsgwalior.in/nptel.php>

### 8.Future Plans of Actions for Next Academic Year

(i) Implementation of National Education Policy (NEP-2020) (ii) NBA Accreditation of all eligible under graduate programs. (iii) NABL Accreditation of Laboratories. (iv) Branding offering MITS-MOOCs to other Institutes (v) Starting following new Under Graduate Programmes: a. Artificial Intelligence (AI) and Data Science b. Artificial Intelligence (AI) and Machine Learning c. Computer Science and Design (vi) Increase in intake in the following Under Graduate Programmes: a) Mathematics and Computing b) Internet of Things c) Internet of Things (IoT) (vii) Development of Virtual Reality Labs (viii) Completion of ongoing infrastructure work (state of the art labs academic block) (ix) Facility for up skilling of working professionals (x) Launching an 'MITS-Industry-Alumni Cell' (xi) Strengthening collaboration with foreign universities (xii) Establishment of a recognized Calibration Centre (xiii) Development of Business Development Centre (xiv) Establishment of a Business Incubation Centre for incubating start-ups (xv) Compliance of the 17 sustainable development goals (SDG) of UN in the campus. (xvi) Implementation of flexible curriculum with provision for minor specialization in allied discipline. (xvii) Launching certificate courses/programmes in collaboration with industry

