

Annual Quality Assurance Report



Manipal School of Life Sciences Manipal Academy of Higher Education, Manipal

(2019-20)



MANIPAL SCHOOL OF LIFE SCIENCES

MANIPAL

(A constituent unit of MAHE, Manipal)

Guidelines for the Creation of the
Internal Quality Assurance Cell (IQAC)
and Submission of Annual Quality Assurance
Report (AQAR) by Accredited Institutions
(For Affiliated/Constituent Colleges)

(Revised as per Revised Accreditation Framework in November, 2017)



राष्ट्रीय मूल्यांकन एवं प्रत्यायन परिषद

विश्वविद्यालय अनुदान आयोग का स्वायत्त संस्थान

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

An Autonomous Institution of the University Grants Commission
P. O. Box. No. 1075, Opp: NLSIU, Nagarbhavi, **Bengaluru - 560 072** India

Part – A

Data of the Institution

(data may be captured from IIQA)

1. Name of the Institution Manipal School of Life Sciences

- Name of the Head of the institution : Dr K Satyamoorthy
- Designation: Director
- Does the institution function from own campus: Yes
- Phone no./Alternate phone no.: 0820-2922058/2571925
- Mobile no.: 9845718604
- Registered e-mail: ksatyamoorthy@manipal.edu
- Alternate e-mail : mlsc@manipal.edu
- Address : Planetarium Complex, MAHE
- City/Town : Manipal
- State/UT : Karnataka
- Pin Code : 576104

2. Institutional status:

- Affiliated / Constituent: Constituent
- Type of Institution: Co-education/Men/Women: Co-education
- Location : Rural/Semi-urban/Urban: Rural
- Financial Status: Grants-in aid/ UGC 2f and 12 (B)/ Self financing (please specify) – Self-financing
- Name of the Affiliating University: NA
- Name of the IQAC Co-ordinator : Dr TG Vasudevan
- Phone no. : 0820-2922058
- Mobile: 9741735917
- IQAC e-mail address: iqac.sols@manipal.edu
- Alternate Email address: mlsc@manipal.edu

3. Website address: www.manipal.edu/mls

Web-link of the AQAR: (Previous Academic Year):

<https://manipal.edu/sls-manipal/about-sls/IQAC/aqar-2018-2019.html>

4. Whether Academic Calendar prepared during the year?

Yes/No....., if yes, whether it is uploaded in the Institutional website: No

Weblink:

5. Accreditation Details:

Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1 st	B+	-	2002	from:2002 to: 2007

2 nd	A	3.3	2016	from:2016 to: 2021
3 rd				from: to:
4 th				from: to:
5 th				from: to:

6. Date of Establishment of IQAC: DD/MM/YYYY: 03/06/2013

7. Internal Quality Assurance System

7.1 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
Internal Audit	27.07.2019, 3 hours	2 Auditors & 12 locations
	27.01.2020, 3 hours	2 Auditors & 14 locations
Management Review Meeting	23.08.2019, 1 hour	12
	06.02.2020, 1 hour	11

Note: Some Quality Assurance initiatives of the institution are:

(Indicative list)

- *Regular meeting of Internal Quality Assurance Cell (IQAC); timely submission of Annual Quality Assurance Report (AQAR) to NAAC; Feedback from all stakeholders collected, analysed and used for improvements*
- *Academic Administrative Audit (AAA) conducted and its follow up action*
- *Participation in NIRF*
- *ISO Certification*
- *NBA etc.*
- *Any other Quality Audit*

8. Provide the list of funds 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 (Rs. In lakhs)
Dr Nirmal Mazumder	Indo-Thai	DST-SERB	2019, 3 years	3.65
Dr Gireesh G	Research	KSTePs, Bengaluru	2019, 1 year	5.00
Dr Nirmal Mazumder	Research	DST	2019, 2 years	5.91
Dr Angela Brand	SPARC	DBT	2019, 2 years	13.84
Dr K Satyamoorthy	BIRAC	DBT	2019, 2 years	19.56
Dr K Satyamoorthy	Research	ICMR	2019, 1 year	16.67
Dr Moka Rajasekhar	Research	DST-SERB	2019, 3 years	17.31
Dr Sudharshan Prabhu	Research	ICMR	2019, 3 years	18.21

Dr Gireesh G	Research	DBT	2019, 5 years	24.72
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9. Whether composition of IQAC as per latest NAAC guidelines: Yes/No: Yes

*upload latest notification of formation of IQAC

10. No. of IQAC meetings held during the year: 2

The minutes of IQAC meeting and compliance to the decisions have been uploaded on the institutional website.....

Yes/No No

(Please upload, minutes of meetings and action taken report)

11. Whether IQAC received funding from any of the funding agency to support its activities during the year? Yes No ✓

If yes, mention the amount: Year:

12. Significant contributions made by IQAC during the current year (maximum five bullets)

- * MSLS Participation in the NIRF rankings of the Government of India
- * Conduct of guest lectures, workshops and conferences
- * Status of objectives during 2019-20 discussed during the relevant meetings
- * Accreditation of diagnostic tests from NABL
- *

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

Plan of Action	Achievements/Outcomes
The objectives for 2019-20 were discussed during the relevant meeting, and the achievement/status of targets for the year were analysed, which were in alignment of the objectives of MAHE, Manipal	The outcomes were mostly in favour of the targets set

14. Whether the AQAR was placed before statutory body? Yes /No: **No**

Name of the Statutory body:

Date of meeting(s):

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

Yes/No: No

Date:

16. Whether institutional data submitted to AISHE: Yes/No: Yes

Year: 2019-20

Date of Submission: Feb 2020

17. Does the Institution have Management Information System?

Yes ✓ No

If yes, give a brief description and a list of modules currently operational.

(Maximum 500 words)

MSLS uses management information systems to ensure smooth interaction between students, faculty, staff and management for their activities. Student Information System (SIS), Students Life Cycle Management (SLcM), Employee Service Portal (ESP) are used for these purposes.

Part-B

CRITERION I – CURRICULAR ASPECTS					
1.1 Curriculum Planning and Implementation					
1.1.1 Institution has the mechanism for well planned curriculum delivery and documentation. Explain in 500 words					
<p>Yes. Institution has Board of Studies, comprised of eminent individuals, which approves the structure and content of the curricula proposed for the various programs offered. Such contents are usually reviewed and revised as per the feedback from the various stakeholders. Once the approval is provided, academic calendars and class schedules are drawn, approved and circulated. Classes are distributed to all teaching faculty and are held as per schedule. Attendance is marked and is an eligibility criterion for appearing in examinations. Examinations are conducted every session (internal) and at the end of every semester (external). Candidate performance is evaluated, contributing to the grades. Online tools are available to monitor curriculum delivery, attendance, evaluation and assessment of performances.</p> <p>The institution has adopted choice-based credit system for all of its programs to provide curricular flexibility to the students. In addition, the institution is also working towards outcomes-based education mode of curriculum delivery for the next academic year.</p>					
1.1.2 Certificate/ Diploma Courses introduced during the Academic year					
Name of the Certificate Course	Name of the Diploma Courses	Date of introduction and duration	focus on employability/ entrepreneurship	Skill development	
NA	NA	NA	NA	NA	
1.2 Academic Flexibility					
1.2.1 New programmes/courses introduced during the Academic year					
Programme with Code		Date of Introduction	Course with Code	Date of Introduction	
MSc Systems Biology (017L09)		Aug 2019	NA	NA	
1.2.2 Programmes in which Choice Based Credit System (CBCS)/Elective course system implemented at the affiliated Colleges (if applicable) during the Academic year.					
Name of Programmes adopting CBCS	UG	PG	Date of implementation of CBCS / Elective Course System	UG	PG
BSc Biotechnology	Yes	-	July 2016	Yes	-
MSc Medical Biotechnology	-	Yes	August 2017	-	Yes
MSc Molecular Biology & Human Genetics	-	Yes	August 2017	-	Yes
MSc Bioinformatics	-	Yes	August 2017	-	Yes
MSc by Research in Life Sciences	-	Yes	August 2017	-	Yes
MSc Systems Biology	-	Yes	August 2019	-	Yes
Already adopted (mention the year): 2016 & 2017					
1.2.3 Students enrolled in Certificate/ Diploma Courses introduced during the year					
	Certificate		Diploma Courses		
No of Students	NA		NA		
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	
PG Diploma (Cellular and Molecular Diagnostics)			March 2018	15	
1.3.2 Field Projects / Internships under taken during the year					
Project/Programme Title			No. of students enrolled for Field Projects / Internships		

PGD Internships (industry)	14
BSc Biotechnology	51
MSc Medical Biotechnology	12
MSc Molecular Biology & Human Genetics	14
MSc Bioinformatics	15
MSc by Research in Life Sciences	2

1.4 Feedback System

1.4.1 Whether structured feedback received from all the stakeholders.

1) Students	2) Teachers	3) Employers	4) Alumni	5) Parents
Yes	Yes	Yes	Yes/ No	Yes/ No

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

Students provide feedback on the university services and faculty through the secure online portals. Faculty provide feedback on the university services and the respective heads of departments. In addition, feedback is obtained from other stakeholders for varying purposes. All feedback is made available to the concerned faculty member/s for suitable corrective action, where needed. If any of the feedback is below the minimum expectations of the institution, then the personnel concerned meet to discuss the ways to improve those aspects. The institution also receives feedback on the curriculum from the students and other external experts regularly and strives to revise the curriculum as required.

CRITERION II -TEACHING-LEARNING AND EVALUATION

2.1 Student Enrolment and Profile

2.1.1 Demand Ratio during the year

Name of the Programme	Number of seats available	Number of applications received	Students Enrolled
BSc Biotechnology	50	1298	54
MSc Medical Biotechnology	15	319	20
MSc Molecular Biology & Human Genetics	15		20
MSc Bioinformatics	15	77	15
MSc by Research in Life Sciences	5	63	2
MSc Systems Biology	10	11	10

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 full time teachers available in the institution teaching only UG courses	Number of full time teachers available in the institution teaching only PG courses	Number of teachers teaching both UG and PG courses
2019-20	162	109	-	-	26

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 (<i>LMS, e-Resources</i>)	ICT tools and resources available	Number of ICT enabled classrooms	Number of smart classrooms	E-resources and techniques used
26	26	Computers, Laptops, Overhead LCD projectors and	9	1	Online databases, journals,

		screens, scanners, audio-visual aids with internet connectivity			videos, e-books, online teaching platforms such as Teams, Skype etc.
2.3.2 Students mentoring system available in the institution? Give details. (maximum 500 words)					
<p>Every undergraduate gaining first year admission to the BSc course is allocated a Teacher-Guardian, who is a faculty member of the institution. A teacher-guardian has about 6-8 wards under his/her custody. These teacher-guardians provide assistance for the students to acclimatize to the new environs, liaise between the students and parents in matters pertaining to student welfare, mentor the students to ensure that they progress in their academic activities and performance, and where students lack, provide suitable curricular suggestions for improvement. The students and teacher-guardians meet regularly to discuss any pertinent issues. In addition, every program has its own class teachers who are responsible for the overall conduct and performance of the students in their respective programs. Students gaining admission to the postgraduate programs have their class teachers, who act as their mentors. In addition to all the above, all the faculty members of the institution take responsibility to address any specific requirements of the students that affects their studies and try to provide better learning opportunities. The heads of the department and the head of institution regularly receive feedback from the faculty members and students to ensure the conduct, development and progress of students.</p>					
Number of students enrolled in the institution		Number of fulltime teachers		Mentor: Mentee Ratio	
271		26		1:10	

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.
0	0	0	0	22
2.4.2 Honours and recognitions 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	Dr Gireesh G	Assistant Professor	Ramalingaswami Re-entry Fellowship, DBT	
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
BSc	017L01	1/1	30.11.2019	14.12.2019
		2/1	-	29.08.2020

		3/2	30.11.2019	14.12.2019
		4/2	-	29.08.2020
		5/3	29.11.2019	14.12.2019
		6/3	25.06.2020	01.07.2020
MSc	017L02 017L03 017L08	1/1	01.01.2020	20.01.2020
		2/1	-	23.07.2020
		3/2	31.12.2019	20.01.2020
		4/2	15.07.2020	23.07.2020
MSc	017L06	1/1	02.01.2020	20.01.2020
		2/1	-	23.07.2020
		3/2	31.12.2019	20.01.2020
		4/2	16.07.2020	23.07.2020
MSc	017L09	1/1	01.01.2020	20.01.2020
		2/1	-	23.07.2020
PGD	017L07	1/1		13.07.2020
		2/1	16.09.2020	03.10.2020

2.5.2 Reforms initiated on Continuous Internal Evaluation(CIE) system at the institutional level (250 words)

Student assessment is conducted through separate examinations, both internally and externally. In addition, students are evaluated for their soft skills via presentations and related aspects. Faculty members also provide continuous assessment of students during the classes, their ability to interact, learn and perform.

2.5.3 Academic calendar prepared and adhered for conduct of Examination and other related matters (250 words)

At the beginning of every semester, the corresponding academic calendar is circulated among all faculty members, mentioning the respective dates for sessional examinations, evaluation and related matters. In addition to this, the institution sends regular communication via circulars to the faculty members just before the start of the examinations mentioning the last date for evaluation and submission of marks. This ensures that the concerned are able to meet the relevant deadlines and the resultant declaration of results happens on time. If there are exceptions in meeting deadlines, an explanation is sought from the concerned faculty member/s. Any relevant and persistent issues related to the examinations and evaluation are further discussed in faculty meetings and suitable remedial measures introduced.

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)

Documents prepared and to be implemented from next academic year

2.6.2 Pass percentage of students

Program me Code	Programme name	Number of students appeared in the final year examination	Number of students passed in final semester/year examination	Pass Percentage
017L01	BSc Biotechnology	51	51	100
017L02	MSc Medical Biotechnology	12	12	100
017L03	MSc Molecular Biology & Human Genetics	14	14	100
017L06	MSc Bioinformatics	15	15	100
017L07	PG Diploma (CMD)	15	15	100
017L08	MSc Research in Life Sciences	2	2	100

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)

Student Satisfaction Survey on overall institutional services is conducted centrally by MAHE, Manipal. Student feedback on faculty in the past year is above the required criteria set by the university (min. 3.5/5). The faculty members are able to see the student feedback on various aspects of their performance at the end of every

semester and are encouraged to rectify/modify their actions and needs accordingly. The annual appraisal of the faculty members includes this feedback as an essential and objective component.

CRITERION III – RESEARCH, INNOVATIONS AND EXTENSION

3.1 Resource Mobilization for Research

3.1.1 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 Academic year
Major projects	1-3 years	DBT-IGSTC, BIRAC DST-SERB, ICMR KBITS	96858105	24929092
Minor Projects	1-3 years	DST, KSTePS, CSIR	154576	79836
Interdisciplinary Projects				
Industry sponsored Projects		IPCA Laboratories Ltd., Enovate BioLife P Ltd.	1678180	551330
Projects sponsored by the University/ College				
Students Research Projects (<i>other than compulsory by the College</i>)				
International Projects				
Any other(Specify)			3680040	3680040
Total			102370901	29240298

3.2 Innovation Ecosystem

3.2.1 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(s)

3.2.2 Awards for Innovation won by Institution/Teachers/Research scholars/Students during the year

Title of the innovation	Name of the Awardee	Awarding Agency	Date of Award	Category
Best Poster Award	Ms. Navya Prabhu	Indian Society of Human Genetics	15.02.2020	Research Scholar
Best Poster Award	Mr. Raviprasad K.V	MAHE-Erasmus MC Center on Genome Stability	29.01.2020	Research Scholar
Second Prize in “Bioquiz 2019”	Mr. Abhimanyu Ray & Mr. Pranav G	Government of Karnataka	07.11.2019	Student
Third Prize in “Bioquiz 2019”	Ms. Bhadra Muralidharan & Mr. Dhanush R Acharya	Government of Karnataka	07.11.2019	Student

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

Incubation Centre	Name	Sponsored by

Name of the Start-up	Nature of Start-up	Date of commencement

3.3 Research Publications and Awards						
3.3.1 Incentive to the teachers who receive recognition/awards						
State		National			International	
3.3.2 PhDs awarded during the year (<i>applicable for PG College, Research Center</i>)						
Name of the Department				No. of PhDs Awarded		
Department of Cell & Molecular Biology				2		
Department of Biophysics				1		
Department of Plant Sciences				1		
Department of Radiation Biology & Toxicology				1		
3.3.3 Research Publications in the Journals notified on UGC website during the year						
	Department		No. of Publication		Average Impact Factor, if any	
National	MSLS, MAHE		1			
International	MSLS, MAHE		40		~3.0	
3.3.4 Books and Chapters in edited Volumes / Books published, and papers in National/International Conference Proceedings per Teacher during the year						
Department			No. of publication			
Departments of Biophysics, Plant Sciences, Cell and Molecular Biology			6			
3.3.5 Bibliometrics of the publications during the last Academic year based on average citation index in Scopus/ Web of Science or Pub Med/ Indian Citation Index						
Title of the paper	Name of the author	Title of the journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self citations
Scopus link: https://www.scopus.com/results/results.uri?cc=10&sort=plf-f&src=s&nlo=&nlr=&nls=&sid=8540d704b90b3d26438f35fa4cfd47ce&sot=aff&sdt=a&sl=15&s=AF-ID%2860114270%29&ss=plf-f&ps=r-f&editSaveSearch=&origin=cto&zone=resultslst						
3.3.6 h-index of the Institutional Publications during the year. (based on Scopus/ Web of science)						
Title of the paper	Name of the author	Title of the journal	Year of publication	h-index	Number of citations excluding self citations	Institutional affiliation as mentioned in the publication
Scopus link: https://www.scopus.com/cto2/main.uri?stateKey=CTOF_1286287267&origin=documentHirsch&txGid=071317926c1c9d629648e39c730b005b&origin=cto#citationOverviewTable				17	1439	Manipal School of Life Sciences / School of Life Sciences, Manipal
3.3.7 Faculty participation in Seminars/Conferences and Symposia during the year :						
No. of Faculty		International level	National level	State level	Local level	
Attended Seminars/ Workshops		0	0	0	0	
Presented papers		7	7	0	0	
Resource Persons		5	12	0	0	

3.4 Extension Activities				
3.4.1 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 co-ordinated such activities	Number of students participated in such activities	
3.4.2 Awards and recognition received for extension activities from Government and other recognized bodies during the year				
Name of the Activity	Award/recognition	Awarding bodies	No. of Students benefited	
3.4.3 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 coordinated such activities	Number of students participated in such activities
“Swachhata Hi Sewa Campaign” for eliminating plastic usage and to dispose plastic wastes (11.9.2019 to 2.10.2019)	MSLS, Manipal	Swachhta campaign rally, flash mob	26	~250
Guest lecture on “Deconstructing Article 35A and 370 – road ahead” (14.8.2019)	MSLS, Manipal	Talk	26	~250
Gandhi Jayanthi Celebrations (1.10.2019)	MSLS, Manipal	Talk	26	~250
Vigilance Awareness Week - 2019 (28.10.2019 to 2.11.2019)	MSLS, Manipal	Awareness program, Quiz, Integrity pledge	26	~250
Birthday celebrations of Sardar Vallabhbhai Patel (31.10.2019)	MSLS, Manipal	Talk	26	~250
Armed Forces Flag Day (7.12.2019)	MSLS, Manipal	Talk	26	~250
Swachhata Pakhwada - MSLS Quiz (27.1.2020)	MSLS, Manipal	Quiz	26	~150
"Matribhasha Diwas" celebrations (21.2.2020)	MSLS, Manipal	Cultural Program	26	~250
National Science Day Residential Training Program (23.2.2020 to 27.2.2020)	MSLS, Manipal	Week-long residential training program for School toppers in and around Manipal	26	~75
National Science Day Celebrations (27 & 28.2.2020)	MSLS, Manipal	Open house Science Exhibition	26	~100
Celebration of International Women’s Day (7.3.2020)	MSLS, Manipal	Talk	26	~250

3.5 Collaborations				
3.5.1 Number of Collaborative activities for research, faculty exchange, student exchange during the year				
Nature of Activity	Participant	Source of financial support	Duration	
Semesters Abroad Program	7 MSc Students	European Scholarship at UGA, Grenoble, France	12 months	
3.5.2 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-To)	Participant
Internship	BiSEP program	Unilever P Ltd., Bengaluru	1/6 to 30/9/2020	Ms Aditya Babu Ms Tejal Durgekar
Internship	BiSEP program	Aurigene Discoveries, Bengaluru	1/6 to 30/9/2020	Ms Aakanksha J Shetty
Internship	BiSEP program	Clarette Biotech Pvt Ltd., Mysuru	1/6 to 30/9/2020	Ms Asharani N
Internship	BiSEP program	Dhitiomics Pvt Ltd. Bengaluru	1/6 to 30/9/2020	Ms Sahana N M Ms Khadija R
Internship	BiSEP program	Enzene Pvt Ltd. Pune	1/6 to 30/9/2020	Mr Gajendra Prasad
Internship	BiSEP program	Genotypic Technologies Pvt Ltd., Bengaluru	1/6 to 30/9/2020	Ms Ramyashree MB Ms Maithili Hedao
Internship	BiSEP program	GenX Diagnostics Pvt Ltd., Bhubaneswar	1/6 to 30/9/2020	Mr Soumya Ranjan Pradhan
Internship	BiSEP program	KIDNAR, Dharwad	1/6 to 30/9/2020	Ms Jahnvy M Joshi
Internship	BiSEP program	ReaGene Biosciences Pvt Ltd. Hyderabad	1/6 to 30/9/2020	Mr Ashwin Rajeev
Internship	BiSEP program	String Bio Pvt Ltd., Bengaluru	1/6 to 30/9/2020	Ms Netravati Angadi
Internship	BiSEP program	UniBiosys Biotech Research Lab, Kochi	1/6 to 30/9/2020	Ms Athira V
Research project	MSc project work	Unilever P Ltd., Bengaluru	1/3 to 31/7/2020	Ms Noyontara Bose Mr Achyut Kumar
3.5.3 MoUs signed with institutions of national, international importance, other universities, industries, corporate houses etc. during the year				
Organisation	Date of MoU signed	Purpose and Activities	Number of students/teachers participated under MoUs	
Achira Laboratories Pvt Ltd., BiFlow Systems, GmbH and Fraunhofer Institute	2019	Cooperation Agreement for MIDARDI-D2P	2 faculty, 1 student	
AtomWise Inc. San Francisco, USA	2019	Agreement for virtual screening of cancer		
Dr Reddy's Institute of Life Sciences, Hyderabad	2019	MoU for research and training		
Erasmus University Medical Centre, Rotterdam, Netherlands	2019	Cooperation Agreement for MECGS establishment	1 faculty	
Kasturba Medical College Hospital, Mangalore	2019	Agreement on Clinical Testing		
Bi Biotech India Pvt Ltd., New Delhi	2020	General agreement on research and education		
Department of Biotechnology, Government of India, New	2020	MoU for roles and responsibilities of		

Delhi		participants in project				
IPCA Laboratories Ltd. Mumbai	2019	Research confidentiality and non-disclosure agreement				
Foundation for Neglected Diseases Research, Bangalore	2019	MoU for research and training				
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				
697.03		942.25				
4.1.2 Details of augmentation in infrastructure facilities during the year						
Facilities	Existing		Newly added			
Campus area	63500 sq. ft.		-			
Class rooms	7		-			
Laboratories	22		-			
Seminar Halls	2		-			
Classrooms with LCD facilities	7		-			
Classrooms with Wi-Fi/ LAN	7		-			
Seminar halls with ICT facilities	2		-			
Video Centre	1		-			
No. of important equipments purchased (\geq 1-0 lakh) during the current year.	>500		15			
Value of the equipment purchased during the year (Rs. in Lakhs)			77.16			
Others						
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			
4.2.1 Library Services:						
	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	457		4		461	
Reference Books						
e-Books						
Journals						
e-Journals						
Digital Database						
CD & Video						
Library automation						
Weeding (Hard & Soft)						
Others (specify)						
As available in MAHE Central Library resources						

4.3 IT Infrastructure									
4.3.1 Technology Upgradation (overall)									
	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Departments	Available bandwidth (MGBPS)	Others
Existing	204	3	Yes	NA	NA	89	Inclusive	1GBPS (Shared)	
Added	03	NA	Yes	NA	NA	NA	NA	NA	
Total	207	3	Yes	NA	NA	89	NA	1GBPS (Shared)	
4.3.2 Bandwidth available of internet connection in the Institution (Leased line)									
1 GBPS (shared)									
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				
4.3.4 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		

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
251.06	250.93	222.73	261.11
4.4.2 Procedures and policies for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc. (<i>maximum 500 words</i>) (information to be available in institutional Website, provide link)			
<p>MSLS, MAHE has established modern facilities within its premises, which include laboratories, library, classrooms, computers with internet and Wi-Fi, canteen etc. All support facilities are accessible for the respective students, researchers, technicians and staff, who undergo relevant training to gain experience. The laboratory instruments are maintained through annual maintenance contracts and support systems (as applicable). Usage of equipment is documented and procedures for repairs and servicing are established and documented. Dedicated staff members are responsible for the maintenance of laboratory equipment. The library has a collection of reference textbooks, theses and is accessible for the students and researchers during the day. The MAHE Health Sciences Library is the main resource, however, for students and researchers and is open for more than 15 hours a day. The library also has a robust online digital repository of research articles, journals, books and databases that are accessible through the intranet within the campus. Sports facilities are maintained by MAHE centrally and are available for all stakeholders of MAHE, as required. Procedures and policies have been established and communicated regularly to all concerned.</p>			
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	Konkani Scholarship, SAGE Scholarship, Staff Child/Spouse Scholarship		40	2279950	
Financial support from other sources					
a) National	Backward community/Minority Scholarships		11	148580	
b) International					
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	
Life Sciences Sector Skill Development Courses (LSSSDC) (training as Biologist and Research Associate)		2018	17	LSSSDC, New Delhi, Tel: +911141042407	
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 by Guidance for Competitive examination	Number of benefited students by Career Counselling activities	Number of students who have passed in the competitive exam	Number of students placed
2019-20	CSIR-JRF/ ICMR-JRF NET Preparative classes	42	18	1	14
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		No. of grievances redressed	Average number of days for grievance redressal		
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
Enzene Biosciences, Pune	8	1	Aurigene, Bangalore	2	1
			Zeusnjoye Diagnostics, Bhubaneswar	1	1
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
2019-2020	1	BSc	MSLS	Ruhr Universitat, Germany	MSc Biochemistry
	1	BSc	MSLS	Ruprecht Karls Universität Heidelberg, Germany	MSc Molecular Biosciences
	1	BSc	MSLS	IISER, Pune	PhD
	5	BSc	MSLS	MSLS, Manipal	MSc MBHG
	4	MSc	MSLS	MSLS, Manipal	PhD
	1	MSc	MSLS	Iowa State University, USA	PhD
	1	MSc	MSLS	University of Nebraska Medical Centre, USA	MS/PhD
	1	MSc	MSLS	Institute for Research in Biomedicine, Spain	PhD
	1	MSc	MSLS	Monash University, Australia	Masters (Clin. Embryology)
	1	PGD	MSLS	IIT Guwahati	MTech

5.2.3 Students qualifying in state/ national/ international level examinations during the year (e.g.: NET/SET/SLET/GATE/GMAT/CAT/GRE/TOEFL/Civil Services/State Government Services)

Items	No. of Students selected/qualifying	Registration number/roll number for the exam
NET	6	302662 KK1716200050 KK1716200169 KL1716200313 KL1516200497 MR2216200959
SET	1	15280380 (K-SET)
SLET		
GATE	7	BT20S31246130 XL20S31251020 XL20S31243156 BT20S31251115 XL19S21220062 BT20S31251100 XL20S31251035
GMAT		
CAT		
GRE	1	14763953
TOEFL		
Civil Services		
State Government Services		
Any Other	1 (ICMR JRF) 2 (JGEEBILS)	36293 GS2020BIOIMS00135 GS2020BIOPHD036158

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

Activity	Level	Participants
Best Physique Competition (MAHE)	Intra-University (different weight categories)	16
Sports	Intra-MSLS	~120
Athletics	Intra-MSLS	~60
PRIMER	Intra-MSLS	~60

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	Sports	Cultural	Student ID number	Name of the student
2019-20	Nil					
5.3.2 Activity of Student Council & representation of students on academic & administrative bodies/committees of the institution (maximum 500 words)						
<p>The students elect the Student Council at the start of every academic year, through a voting process. All programs have elected representatives in the Council. The elected members choose further student representatives for various committees of the council. There are seven such committees including cultural, editorial, finance, photography, social, social media and sports. The cultural committee in turn has clubs for dance, arts and drama, debate and such. The Student Council elected during 2019-20 organized, conducted and participated in several events of the School and the university. The students actively participated in all UGC-mandated activities such as the Rashtriya Ekta Divas, Matribasha Divas, Vigilance Awareness Week and Swachhata Pakhwada, among others including Independence and Republic days, and Teachers Day. The Students Council and several students helped in the conduct of open science exhibition as part of the National Science Day celebrations at the School. In addition, there were active contributions through social committee in conducting mental health awareness programs, organizing visit to old age home and teaching schoolchildren. The sports committee was involved in organizing athletic and sports events throughout the year, including Annual Athletic Meet. The literary and cultural committee organized two events of 'Primer', an intra-college fest of cultural extravaganza. However, the pandemic put paid to conduct and participation in 'Utsav' – the inter-college university cultural fest. The students also celebrated Onam, Deepavali and Halloween in the year. The Annual Day was also cancelled due to the pandemic.</p> <p>The President of the Student Council has representation in the Board of Studies meetings as well as the IQAC meetings. Nominees of the council attend these meetings. In addition, students represent the School in university-level meetings pertaining to student affairs, hostels, sports events, cultural activities among others. All their contributions are discussed and implemented as applicable.</p>						
5.3 Alumni Engagement						
5.3.1 Whether the institution has registered Alumni Association? Yes/No, if yes give details (maximum 500 words):						
No, it is part of MAHE Alumni Relations						
5.3.2 No. of registered enrolled Alumni: 1348						
5.3.3 Alumni contribution during the year (in Rupees) : Nil						
5.3.4 Meetings/activities organized by Alumni Association : 12						
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)						
6.1.2 Does the institution have a Management Information System (MIS)? Yes/No/Partial: Yes						
MSLS has a well-built management information system to support smooth interaction and activities for students, faculty members, staff and management through various portals such as Student Information Systems (SIS), Students Lifecycle Management (SLcM), Employee Service Platform (ESP), Purchase Management through PeopleSoft portal, among others, supported by MAHE, Manipal						
6.2 Strategy Development and Deployment						
6.2.1 Quality improvement strategies adopted by the institution for each of the following (within 100 words each):						
❖ Curriculum Development: The curriculum for all the programs at the School are regularly scrutinized for the						

<p>content, relevance and suitability to the program and contemporariness for the graduating students, while also ensuring compliance to the regulatory requirements. Towards this, experts from academia and industry, both in India and abroad are approached for their inputs, based on which the necessary modifications for existing programs and development of curriculum for new programs are carried out. The Board of Studies and Academic Senate of the institution play an important role in ensuring the relevance and approval of all the curricula of the School.</p>
<p>❖ Teaching and Learning: Teaching processes are streamlined through requirements for teaching schedule, completion of syllabus, examination and evaluation on time, matching that described in the academic calendar, through the use of classroom and online teaching, audio-visual aids, practical sessions and other modes prescribed in the curriculum. Learning is monitored through continuous assessment and evaluation of the students, coaching class as required and by involving parents, where required. Efforts made to minimize absenteeism in classes by mandating attendance for appearing in sessional examinations are being monitored for effectiveness</p>
<p>❖ Examination and Evaluation: All examinations for UG, PG and PGD programs are conducted with the help of digital e-pads, without the use of papers and other online tools available. The evaluation is thus digital and paperless, thereby helping in faster completion of the evaluation and declaration of results. Students also have the option of supplementary examinations soon after results declaration, thereby ensuring that their second chance at repeating examinations happens sooner, without the loss of time.</p>
<p>❖ Research and Development: With research being the primary focus of the School, the number and quantum of support for research projects from national and international funding agencies have been prioritized, resulting in an increase and diversity of the research areas. This has also resulted in improvement in the quality and quantity of research outcomes in terms of publications in top-quartile, indexed journals and patent applications. Infrastructure upgradation, improvement and maintenance has been identified as a requirement and suitable measures are underway to address the same.</p>
<p>❖ Library, ICT and Physical Infrastructure / Instrumentation: The library resources are centralized at the MAHE Health Sciences Library, although the School maintains a relatively small collection of about 400 books in its own library. The entire campus is Wi-Fi enabled and equipped with necessary computers and other connectivity tools to impart teaching and enable learning. The School has one of the modern infrastructure, research instrumentation including high-end equipment and diverse scientific facilities available in this region of the country.</p>
<p>❖ Human Resource Management</p>
<p>❖ Industry Interaction / Collaboration: The School actively seeks and promotes industry collaborations through intermittent interactions. Research programs have industry partners where necessary. The School hosts the BiSEP PG Diploma program in Cellular and Molecular Diagnostics supported by the Government of Karnataka, which requires active collaborations with the industry since students undertake internship with such industrial partners every year. Thus, the School initiates frequent interactions through lectures, seminars, webinars and other drives to ensure that personnel from industry are associated with the activities of the School. In addition, the School has also MoUs with industries across the country.</p>
<p>❖ Admission of Students: Through concerted efforts by the institution and associated departments at the university, admissions to all programs were satisfactorily completed as per requirements. The entrance examinations for PG programs were conducted separately to ensure better distribution of interested applicants and quality of admissions.</p>
<p>6.2.2 : Implementation of e-governance in areas of operations:</p>
<p>❖ Planning and Development</p>
<p>❖ Administration</p>
<p>❖ Finance and Accounts</p>
<p>❖ Student Admission and Support</p>
<p>❖ Examination</p>

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 - 2020	Dr K Satyamoorthy	Joint conference of the Annual Meeting of the International Ovarian Cancer Research Consortium and International Symposium on Tumor Microenvironment, hosted by the Stephenson Cancer Center, University of Oklahoma Health Sciences Center, Oklahoma City, USA (30.06.2019 to 01.07.2019) – Guest lecture		50000
2019 - 2020	Dr. Guruprasad K.P	"XXXVII Annual Conference of Indian Academy of Neurosciences" held at All India Institute of Medical Sciences, New Delhi (19.11.2019 to 21/11/2019) & XLIV Annual Conference of Environmental Mutagen Society of India and International Symposium on Present and Future Challenges of Xenobiotic Mediated Mutagenesis: Impact on Human Health & Environmental Safety T CSIR-Indian Institute of Toxicology Research, Lucknow (18.02.2020 to 21.02.2020) – poster		50000
2019 - 2020	Dr. Satish Rao B.S	55 th Congress of the European Societies of Toxicology- Science Providing Solutions (EUROTOX 2019) held at Helsinki, Finland (08.09.2019 to 11.09.2019)		50000
2019 - 2020	Dr. Moka Raja Sekhar	45 th Annual Meeting of the Indian Society of Human Genetics (ISHG), The Madras Medical Mission, Chennai (13.02.2020 to 14.02.2020) – poster		24146
2019 - 2020	Dr. Saadi Abdul Vahab	45 th Annual Meeting of the Indian Society of Human Genetics (ISHG), The Madras Medical Mission, Chennai (13.02.2020 to 14.02.2020) _ poster		50000
2019 - 2020	Dr. A. Muthusamy	2 nd National Conference on Gene Revolution for Profitable Agriculture at Univ. of Agricultural Sciences, Dharwad (08.01.2020 to 10.01.2020) – Paper		18556
2019 - 2020	Dr. Herman Sunil Dsouza	International Conference "Lead and heavy metal toxicity in health and neurosciences" at NIMHANS Bangalore (09.02.2020-10.02.2020) – Oral		10543
2019 - 2020	Dr. Murali T.S	3 rd Manipal International Infectious Diseases Conference; Theme: Tropical Infections and Global Health (10.08.2019 to 11.08.2019) & 9 th Annual Conference of the Clinical Infectious Diseases Society – CIDSCON		42977

		2019 at Clinical Infectious Diseases Society, India (23.08.2019 to 25.08.2019)		
2019 - 2020	Dr. Kamalesh Mumbrekar	XLIV Annual Conference of Environmental Mutagen Society of India and International Symposium on Present and Future Challenges of Xenobiotic Mediated Mutagenesis: Impact on Human Health & Environmental Safety CSIR-Indian Institute of Toxicology Research Lucknow (18.02.2020 to 20.02.2020) – poster		10392
2019 - 2020	Dr. Vidhu Sankar Babu	6 th International Conference on Recent Trends and Advancements in Engineering and Technology (ICRTAET-2019) at Shri Mata Vaishno Devi University, Katra, Jammu & Kashmir (17.01.2020 to 18.01.2020)		15930
2019 - 2020	Dr. Babitha K.S	International Conference on Advances in Chemical and Materials Science at Mangalore University (17.10.2019 to 19.10.2019)		6293
2019 - 2020	Dr. Shama K Prasada	15 th Indo-Australian Biotechnology Conference at The University of Adelaide Medical School, Adelaide Health and Medical Sciences, South Australia (16.11.2019 to 18.11.2019) – invited talk & 3 rd Indo-Australian EMT Symposium Centre for Cancer Biology, University of South Australia, Adelaide, (19.11.2019) – invited talk		50000
2019 - 2020	Dr. Manjunath B Joshi	DBT Project Presentation at New Delhi on (14.10.2019)		13426
2019 - 2020	Dr. Sandeep P Mallya	7 th Annual Symposium Society of Biological Chemists (India) Coastal Karnataka Chapter at MSLS, Manipal (23.11.2019)		1196
2019 - 2020	Dr. Nirmal Mazumder	Article Processing Fee for publishing in Journal "Frontiers in Physics" (Nov 2019) & BIRAC Project presentation at Bangalore from 25-04-2019 & 26-04-2019		13731

6.3.2 Number of professional development / administrative training programmes organized by the College 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	Dates (from-to)	No. of participants (Teaching staff)	No. of participants (Non-teaching staff)
2019	M-FITLAR, an Orientation Module		06-08-2019 to 08-08-2019	1	
2019	Springer Nature advance Author Workshop		11-09-2019	1	

2019	QPR Suicide Prevention Gatekeeper Program		10-10-2019	2	
2020	Impartus Lecture Capturing System Training		23-03-2020 & 07-09-2020	26	
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		Date and Duration (from – to)	
Data Carpentry Instructor Training Programme		1		07-12-2019	
Online Scientific Writing Program		2		19-06-2020	
OSA Optical Sensors and Sensing Congress		1		22-06-2020	
Webinar on Scopus		1		29-06-2020	
Online Workshop on Scientific Writing and Research Ethics		1		29-06-2020	
Data Carpentry Instructor Training Programme		1		07-12-2019	
6.3.4 Faculty and Staff recruitment (no. for permanent/fulltime recruitment):					
Teaching			Non-teaching		
Permanent		Fulltime	Permanent		Fulltime/temporary
26		0	40		0
6.3.5 Welfare schemes for					
Teaching	Provident fund, school fees for reimbursement, LTC, Housing allotment, MAHE interest subsidy on utility loan subsidy, Medicare facility, National Pension Scheme, Sodexo meal coupons, Scholarship on course fee of spouse, children, employees, support for attending conferences, publications, best teacher award.				
Non-teaching	Provident fund, school fees reimbursement, Medicare facility, ESI scheme, scholarship for course fee for spouse, children and employees, Felicitation of employees, Best service award				
Students	Medicare facilities, Anti-ragging committee, Counselling, Felicitation of students for co-curricular and academic activities, Support for attending conferences, Scholarships				
6.4 Financial Management and Resource Mobilization					
6.4.1 Institution conducts internal and external financial audits regularly (with in 100 words each) The Finance Audits are conducted centrally at MAHE					
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/ Grants received in Rs.		Purpose	
Stempeutics Research P Ltd., Back your science Research Foundation, Enovate Biolife P Ltd. etc.		728330		Industry Projects and Consultancy Services	
6.4.2 Total corpus fund generated					
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	TUV	Yes	Self	
Administrative	Yes	TUV	Yes	Self	
6.5.2 Activities and support from the Parent – Teacher Association (at least three)					
Inputs from parents/guardians, where applicable, are incorporated to monitor the progress of students					
6.5.3 Development programmes for support staff (at least three)					

Undertaken at the university level				
6.5.4 Post Accreditation initiative(s) (mention at least three)				
6.5.5				
a. Submission of Data for AISHE portal : Yes				
b. Participation in NIRF : Yes				
c. ISO Certification : Yes				
d. NBA or any other quality audit : Yes – NABL Accreditation				
6.5.6 Number of Quality Initiatives undertaken during the year				
Year	Name of quality initiative by IQAC	Date of conducting activity	Duration (from----- to-----)	Number of participants

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-to)	Participants	
		Female	Male
Gender Sensitization programme	22.1.2020	195	104

7.1.2 Environmental Consciousness and Sustainability/Alternate Energy initiatives such as: Percentage of power requirement of the College met by the renewable energy sources

7.1.3 Differently abled (Divyangjan) friendliness

Items Facilities	Yes/No	No. of Beneficiaries
Physical facilities	Yes	0
Provision for lift	Yes	0
Ramp/ Rails	Yes	0
Braille Software/facilities	No	NA
Rest Rooms	No	NA
Scribes for examination	No	NA
Special skill development for differently abled students	No	NA
Any other similar facility	No	NA

7.1.4 Inclusion and Situatedness

Enlist most important initiatives taken to address locational advantages and disadvantages during the year

Year	Number of initiatives to address locational advantages and disadvantages	Number of initiatives taken to engage with and contribute to local community	Date and duration of the initiative	Name of the initiative	Issues addressed	Number of participating students and staff
2019	-	1	01-10-2019 (1 day)	Teach To Each	Teach school children about joys of chemistry and physics, by Students Council and OSA Chapter,	40

					MSLS	
2019	1	-	04-10-2019 (1 day)	Rejoy Recycle	Old newspapers and wastes recycled to new envelopes and books for use in medical stores	20
2019	-	1	05-10-2019 (1 day)	Gully Joy	Drawing competition for slum children on 'Climate change & Save Earth', fun and games, planetarium visit	20
2020	-	1	23-02-2020 to 28-02- 2020 (6 days)	Residential Training Program	Science teaching and hands-on training for Class IX & X toppers from schools in and around Manipal	50
2020	1	-	27-02-2020 to 28-02- 2020 (1 day)	Science Exhibition	Science Exhibition to all school students, teachers in and around Manipal	400

7.1.5 Human Values and Professional Ethics

Code of conduct (handbooks) for various stakeholders

Title	Date of Publication	Follow up (maximum 100 words each)

7.1.6 Activities conducted for promotion of universal Values and Ethics

Activity	Duration (from-----to-----)	Number of participants
Independence Day	15.08.2019 – 15.08.2019	~300
Republic Day	26.01.2020 – 26.01.2020	~300

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

Installation of energy-efficient solar and LED lamps where possible, Segregation of wastes, Installation of eco-friendly air-conditioners, Awareness on energy saving and management, Part of ISO 14001 EMS, Conduct of Swachh Bharath campaign among students and staff

7.2 Best Practices

Describe at least two institutional best practices

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

Title of the Best Practices - Research Project work in all degree programs

Objectives:

To provide research laboratory exposure to all students graduating from the various programs offered by MSLS, MAHE.

The context:

Scientific research in the areas related to biotechnology and bioinformatics require scientific knowledge, technical skills and an ability to interpret data and innovate. Such skills are acquired only through hands-on experimentation and exposure to a laboratory/research environment. When such concept is introduced in the curricula, its implementation is streamlined.

The Practice:

Every program offered by MSLS, MAHE culminates in a research project for a period of at least one semester, wherein students pursue laboratory work on a set of aims and objectives, collate and present the results in the form of a dissertation and defend the same during a viva-voce examination. This provides them with the exposure to the research laboratory set-up and the experience that helps them in their future endeavours.

Evidence of Success:

Close to three-fourths of the graduates choose to pursue a higher degree involving research component or in technical

positions in an industrial set-up. Their hands-on research exposure during their degree programs facilitates their admission and/or employment

Title of the Best Practices – Advanced diagnostic services for patients

Objectives:

To provide high-end diagnostic tests to the needy patients of hospitals in and around Manipal on a not-for-profit basis.

The context:

Patients visiting several hospitals in the Udupi, Dakshina Kannada and other neighbouring districts have limited access to high-end molecular and/or cytogenetic diagnostic tests, or have to pay exorbitant costs in sample transport and examination. A provision for conducting such advanced diagnostic procedures in close proximity will help such individuals and families, more so if it is done not-for-profit.

The Practice:

MSLS, over the course of its decade of existence, has developed infrastructure and in-house capability to perform tests related to DNA sequencing, karyotyping, cytogenetics, and metal estimation. These tests are provided to patients reporting to collaborating hospitals in the region.

Evidence of Success:

The diagnostic facilities at MSLS are being used by the respective hospitals of the regions to the tune of about 600-700 samples on average being tested at our facilities every year.

7.3 Institutional Distinctiveness

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

The Manipal School of Life Sciences (MAHE, Manipal) focuses on research in the areas of human health using biotechnological interventions, specifically towards diseases such as cancers, infectious, genetic, inherited and metabolic disorders. Recent research in these and associated areas has resulted in close to 200 peer-reviewed and high impact publications in renowned journals in the past five years, through targeted approaches in promoting scientific research in such areas. About 12 patent applications filed are at different stages of scrutiny and faculty members and student researchers continue to make an annual average of 150-odd conference presentations. Despite the severe problems forced by the coronavirus pandemic, the academic year 2019-20 reflected the continued pursuit of research goals in these thrust areas. Conferences, symposia, workshops and guest lectures were conducted to promote, share and disseminate knowledge and expertise in the thrust areas of the School. The School continues to expand its horizons through the development of new curriculum for new PG programs such as the one started this year in the area of Systems Biology, while pushing for new frontiers in its research areas. This has resulted in the plans for novel MSc programs in the areas of Genome Engineering and Tissue Engineering in the coming years.

8. Future Plans of action for next academic year (500 words)

Start new PG program (MSc Tissue Engineering) in the coming academic year, sustain existing programs, excel in current academic and research programs, enable utilization of facilities in the annex, strive for scholarships and exchange programs at national and international level, increase outreach activities for societal benefit.

Name Dr T.G. Vasudevan

Name Dr K. Satyamoorthy

Signature of the Coordinator, IQAC

Signature of the Chairperson, IQAC

Abbreviations:

CAS	-	Career Advancement Scheme
CAT	-	Common Admission Test
CBCS	-	Choice Based Credit System
CE	-	Centre for Excellence
COP	-	Career Oriented Programme
CPE	-	College with Potential for Excellence
DPE	-	Department with Potential for Excellence
GATE	-	Graduate Aptitude Test
NET	-	National Eligibility Test
PEI	-	Physical Education Institution
SAP	-	Special Assistance Programme
SF	-	Self Financing
SLET	-	State Level Eligibility Test
TEI	-	Teacher Education Institution
