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## Report of Academic Audit of School of Science (SOS) (2019-2020)

### **Preface:**

The academic audit of teaching schools / departments of ITM University, Turari campus was conducted by the Audit Team as per the order issued by the Dean Academics vide letter no 537 Dated June 17, 2019. The internal academic audit committee also constituted to assist the external academic auditors.

The main objective of the academic audit was to ascertain the presence and adequacy of the quality benchmark of various parameters stipulated by National Assessment and Accreditation Council.

### **Documents to be verified:**

1. Adherence to Academic Calendar
2. Number of faculty members in the school
3. Cadre ratio in the school
4. Load distribution of the semester/trimester/annual
5. Time Table
6. Course files
7. Quality of assignments given to the students
8. Quality of midterm and end term examinations
9. Feedback collected and ATR
10. Attainment of CO, PO, PSO and PEO
11. Up-gradation of Syllabus if required
12. Status of equipment and consumables in the Laboratory

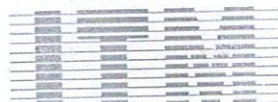
The audit teams held separate meetings with the Dean and members of the faculty. The reports are compiled and appended.

*The audit parameters were categorized under various categories as follows.*

### **Pre-Semester Audit:**

- Steps followed in the designing of syllabus and curriculum.
- Submission of BOS minutes in Dean Academics office with proof of changes made in the curriculum and syllabus.
- POs embedded in the curriculum and COs embedded in the syllabus of each subject.
- Assignment of all the subjects to teachers at least 15 days prior to the commencement of Semester, Trimester or year (while assigning the subject the choice of the subject by the faculties to be taken into consideration by subsequent





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meeting and discussion).

- Release of Academic calendar and its alignment with the University Calendar.
- Internal assessment – components, marks allocated, Quality of Mapping to COs- Uniqueness.
- Uploading the schemes on MIS portal prior to the commencement of new semester.

#### **During Semester Audit:**

- Selection of teaching pedagogy and use of appropriate teaching aids.
- Conduction of continuous assessment components as per the schedule, evaluation of answer sheets and showing the evaluated answer sheets to the students.
- Evaluation of student's progress, communicating the progress to the parents and conducting parent-teacher meetings.
- Monitoring students' attendance and communicating the same to the parents.
- Planning and conduction of workshops included in the curriculum as per the schedule announced in the academic calendar.
- Allocating students to the teachers for Research Projects, finalizing topics for research.
- Preparing students' support system – planning remedial and coaching classes.
- Completing the internal assessment, evaluating answer sheets, assignments and projects and showing the evaluated sheets to the students.
- Uploading the marks on MIS at least 7 days prior to the commencement of term-end examination.
- Ensuring the implementation of the Examination eligibility rules based on attendance and internal assessment.
- Collecting Feedback from the students.
- Steps taken according to the feedback.
- E-learning modules – follow up and ensuring examination is conducted on time.
- Ensuring that the Research Projects are submitted and evaluated on time.
- Submission of research papers or patents on the basis of Research Projects.
- Release of time table, frequency of changes in time table.
- Uploading the events and research work (research papers, patents and chapters etc.) on MIS portal.

#### **End of Semester/Trimester Audit:**

- Preparation of Question Papers with embedded COs and Blooms Levels.
- Evaluation of Answer Sheets within ten days of the completion of examination.
- Declaration of results within 15 days of the completion of examination.



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### **Audit of the Students Profile:**

- Demand ratio (Applications received Vs Sanctioned Strength).
- Attendance records – Quality of Records maintained, average attendance, cut off attendance for mid-term and end term Exams.
- Students' involvement in extra-curricular & Co- curricular activities.
- Records of the Study tour / industrial visits / exhibitions / Internship / Training.
- Records of the Students Achievements.
- Records of the Final Placement, higher education and Entrepreneurship of the Students.
- Analysis of the Final placements and identification of weak areas, strategies for improvement.

### **School of Science (SOS):**

The academic audit committee reviewed the academic progress of the School of Science (SOS) which included the syllabus, faculty status, employability of the course, facilities available etc. The Dean gave a brief outline of the courses and its prospects.

The school offers following courses:

1. B. Sc. (Hons.) Biotechnology
2. B. Sc. (Hons.) Microbiology
3. B. Sc. (Hons.) Food Technology
4. B. Sc. (PCM/CS)
5. M. Sc. (Biotechnology)
6. M. Sc. (Food Technology)
7. Ph.D. (Sciences)





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**Audited Report of School of Science (SOS)**

Pre-semester audit	S. No.	Items	Yes	No	Verified
	1	Steps followed in the designing of syllabus and curriculum		√	No
	2	Submission of BOS minutes in Dean Academics office with proof of changes made in the curriculum and syllabus	√		Yes
	3	POs embedded in the curriculum and COs embedded in the syllabus of each subject		√	No
	4	PBL, ABCA and Assignments of all the subjects to teachers at least 15 days prior to the commencement of Semester, Trimester or year (while assigning the subject the choice of the subject by the faculties to be taken into consideration by subsequent meeting and discussion)	√		Yes
	5	Release of Academic calendar and its alignment with the University Calendar	√		Yes
	6	Internal assessment – components, marks allocated, Quality of Mapping to COs – Uniqueness		√	No
Mid-semester audit	S. No.	Items	Yes	No	Verified
	1	Selection of teaching pedagogy and use of appropriate teaching aids I. Case studies II. Role Playing III. Simulations IV. Experiential Learning V. Technology Enhanced Learning VI. Flipped Class VII. Collaborative Learning VIII. Cross-Disciplinary Learning IX. Field Trips X. Guest Lectures XI. Learning through workshops XII. Seminar Presentation XIII. Application Based Activities	√		Yes
	2	Conduction of continuous assessment components as per schedule, evaluation of answer books and showing the evaluated answer sheets to the students		√	No
	3	Evaluation of student's progress, communicating the progress to the parents and conducting parent-teacher meetings		√	No
	4	Monitoring students' attendance and communicating to the parents	√		Yes





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	5	Planning and conduction of workshops included in the curriculum as per the schedule announced in the academic calendar		√	No
	6	Allocating students to the teachers for Research Projects, finalizing topics for research	√		Yes
	7	Preparing students' support system – planning remedial and coaching classes		√	No
	8	Completing the internal assessment (PBL/ABCA), evaluating answer sheets, assignments and projects and showing the evaluated sheets to the students	√		Yes
	9	uploading the marks on MIS at least 7 days prior to the commencement of end-term examination		√	No
	10	Ensuring the implementation of the Examination eligibility rules based on attendance and internal assessment	√		Yes
	11	Collecting Feedback from students: I. Content Based Feedback a. Alumni b. Student c. Faculty d. Entrepreneur II. Student Satisfaction Survey (SSS)	√		Yes
	12	Steps taken on the feedback of students and faculty	√		Yes
	13	E-learning modules – follow up and ensuring examination is conducted on time		√	No
	14	Ensuring that the Research Projects are submitted and evaluated on time	√		Yes
	15	Submission of research papers or patents on the basis of Research Projects		√	No
	16	Release of time table, frequency of changes in time table	√ (2)		Yes
<b>End-semester audit</b>	<b>S. No.</b>	<b>Items</b>	<b>Yes</b>	<b>No</b>	<b>Verified</b>
	1	Preparation of Question Papers with embedded COs and Blooms Levels		√	No
	2	Evaluation of Answer Sheets within ten days of the completion of examination		√	No
	3	Declaration of results within 15 days of the completion of examination		√	No
<b>Student profile</b>	<b>S. No.</b>	<b>Items</b>	<b>Yes</b>	<b>No</b>	<b>Verified</b>
	1	Demand ratio (Applications received Vs Sanctioned Strength)	> 1		Yes
	2	Attendance records – Quality of Records maintained, average attendance, cut off attendance for mid-term and end term Exams	√		Yes





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	3	Students' involvement in extra-curricular & Co-curricular activities	√		Yes
	4	Records of the Study tour / industrial visits / exhibitions / Internship / Training	√		Yes
	5	Records of the Students Achievements		√	No
	6	Records of the Final Placement, higher education and Entrepreneurship of the Students		√	No
	7	Analysis of the Final placements and identification of weak areas, strategies for improvement	√		Yes

### Recommendation of Academic Audit:

1. Policy of Curriculum Design and Development should be immediately developed and the whole process of Curriculum Development and Review should be comprehensively defined.
2. Outcome Based Education (OBE) should be effectively implemented and continually appraised.
3. Outcome Based Education (OBE) workshops should be conducted.
4. Policy for Outcome Based Education (OBE) needs to be created at the earliest.
5. Value added courses (VAC) should be of 30 hour duration, be outside the curriculum.
6. Policy on Teaching Learning and Value Added Courses (VAC) needs to be developed at the earliest.
7. Policy for Electives/Choice Based Credit System *should* be developed to meet the industry requirements.
8. Introduce the system of obtaining structured feedback from all stakeholders on a regular basis.
9. Orientation Programs should be more focused to acquaint the students with Campus/Hostel life, facilities available, teaching learning process, training & placements, student welfare activities, counselling/mentoring etc. so as to help foster a level of comfort.
10. Counselling/Mentoring activity should be intensified to resolve social, personal or emotional problems of students.
11. Policy on Interventions for slow and advanced learners needs to be developed.
12. LMS when adopted can also provide the attainment matrix of CO/PO attainments based on OBE framework.
13. There should be formal system of sanctioning research projects based on the projected number of students for the ensuing academic year.
14. Orientation programs for all new faculty and staff members should be held and records should be maintained.
15. COE should formulate a structured Standard Operation Procedures (SOP) Manual or Guidelines to standardize the examination and evaluation processes/procedures.
16. The examination scheduling process is found to be in order. However, this process



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- could be fully automated once the appropriate ERP system is implemented.
17. Faculty should be encouraged and incentivized to secure awards/recognitions.
  18. University must aid and assist NCC/NSS activities to promote social work in the community by the students.
  19. There is an immediate need for a campus wide Wi-Fi network of at least 1 GBPS bandwidth.
  20. The University should also develop Smart Classrooms.
  21. The University Library should be made fully automated with requisite hardware.
  22. The University should establish a Student Council which will not be an elected body. The selection in Student Council will be purely based on merit.
  23. There is a dire need of a career counselor to fulfill the expectations of the students.
  24. It is suggested that the University should ensure the formal registration of its Alumni Association to give it a legal entity and an Alumni Relationship Coordinator should be duly appointed.
  25. The University should enter in collaboration with global universities to have joint research and faculty/student exchange mechanisms.
  26. There should be a professional mechanism for counseling of students especially girl students to ensure their well-being.
  27. The University may also consider installing motion sensors in classrooms/washrooms/labs to automatically switch off lights when not in use.
  28. Student Eco Club should be formed to take initiatives for keeping the campus clean, green and litter free.

Prof. M. K. Trivedi  
External Auditor

Prof. C. S. Malvi  
External Auditor

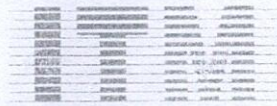
Dr. Sonia Johri

Dean Academics  
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Dr. Omveer Singh  
Registrar

Dr. Omveer Singh  
REGISTRAR  
ITM University  
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Ref: ITMU/DAO/2019-20/ 996

Date: 20-03-2020

To,

Dean

School of Science (SOS)

ITM University Gwalior, India

Subject: Regarding academic review report

Dear Sir,

It is bring your kind notice that the Academic Review Committee has visited your school for Pre-semester, Mid Semester and End-semester audit about ongoing academic progress of your school on various parameters. After visit, the committee has submitted the audit report to Hon'ble Vice Chancellor for further necessary instructions. After the approval of Hon'ble Vice Chancellor, the report is provided to you for necessary and required corrective measures.

You are advised to submit the action taken report (ATR) on corrective measures to Hon'ble Vice Chancellor for their information and further suggestions.

Thanking You,

Dean  
Dr. Ranjeet Singh Tomar of Engg. & Tech.  
Chairman, Academic Review Committee  
ITM University  
Gwalior  
ITM University Gwalior (MP)





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## ACTION TAKEN REPORT ON ACADEMIC AUDIT REPORT (SOS)

S. No.	Prescription	Action Taken
1.	Policy of Curriculum Design and Development should be immediately developed and the whole process of Curriculum Development and Review should be comprehensively defined	Policy of Curriculum Design and Development is developed
2.	Implementation of Outcome Based Education (OBE)	Existing curricula is aligned with Outcome Based Education (OBE) frameworks
3.	Conduct multiple Outcome Based Education (OBE) workshops	Outcome Based Education (OBE) workshops are regularly conducted
4.	Policy for Outcome Based Education (OBE) needs to be created at the earliest	Policy for Outcome Based Education (OBE) is created and in place
5.	Value added courses (VAC) should be of 30 hour duration, be outside the curriculum	Value added courses (VAC) with 30 hours are offered to all the students
6.	Policy on Teaching Learning and Value Added Courses (VAC) to be developed	Policy on Teaching Learning and Value Added Courses (VAC) is developed and in place
7.	Policy for Electives/Choice Based Credit System be developed	Policy for Electives/Choice Based Credit System is created and in place
8.	Introduce the system of obtaining structured feedback from all stakeholders on a regular basis.	Structured feedback from all stakeholders on a regular basis is obtained
9.	Orientation Programs should be made more focused to acquaint the students about Campus/Hostel life, facilities available, teaching learning process, training & placements, student welfare activities, counselling /mentoring etc. so as to help develop a level of comfort	Orientation Programs are conducted every year focusing on facilities of the University
10.	Counselling /Mentoring activity should be intensified to resolve social, personal or emotional problems of students.	Counselling/Mentoring activity is done on regular basis focusing on students social, personal or emotional problems
11.	Policy on Interventions for slow and advanced learners need to be developed	Policy on Interventions for slow and advanced learners is developed and in place
12.	LMS when adopted can also provide the attainment matrix of CO/PO attainments based on OBE framework.	LMS is in adopted and will provide the support for attainment matrix of CO/PO attainments
13.	There should be formal system of sanctioning research projects based on the projected number of students for the ensuing academic year	Formal system of sanctioning research projects based on the projected number of students is done before the start of the academic year
14.	Orientation programs for all new faculty and staff should be held and records maintained	Orientation Programs for all new faculty and staff is held periodically every Academic Year
15.	COE should bring out a structured Standard Operation Procedures (SOP)	Standard Operation Procedures (SOP) Manual or Guidelines of Examination and Evaluation





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	Manual or Guidelines to standardize the examination and evaluation processes/procedures	processes is brought and in place
16.	The examination scheduling process is found to be in order. However, this process could be fully automated once the appropriate ERP system is implemented	Examination division is completed automated
17.	Faculty should be encouraged and incentivized to strive for awards/recognitions	Research incentive scheme is in place and incentivized
18.	University must invest in and assist NCC/NSS activities to promote social work in the community by the students	NCC/NSS cell of the University is very active and promoting social work in the community
19.	There is an immediate need for a campus wide Wi-Fi network of at least 1 GBPS bandwidth	1 GBPS band-width is enabled
20.	The University should also create some Smart Classrooms	More than 20 classrooms have been installed with Smart Classrooms
21.	Library should be made fully automated with requisite hardware	Library is fully automated with all the necessary software and hardware
22.	The University should establish a Student Council which may not be an elected body	Student Council has been established
23.	There is a serious need of a career counsellor to manage the expectations of the students	University will establish career counselling and guidance cell to manage the expectations of the students
24.	It is suggested University should get Alumni Association formally registered to give it a legal entity and an Alumni Relationship Coordinator be appointed	Alumni Association of University is formally registered and an Alumni Relationship Coordinator has been appointed
25.	Enter into collaboration with global universities to have joint research and faculty/student exchange mechanisms	ITM University has global universities collaboration for faculty/student exchange mechanisms
26.	There should be professional set up for counselling of students especially girl students for their mental well-being	Professional set up for counselling of students especially girl students for their mental well-being has been setup
27.	University may consider installing motion sensors in classrooms/washrooms/labs to automatically switch off lights when not in use	Planning is under process to install motion sensors in classrooms/washrooms/labs to automatically switch off lights when not in use
28.	Student Echo Club should be formed to take initiatives for keeping the campus clean, green and litter free	Student Echo Club has been formed and activities of the club are focused on campus clean, green and litter free

*Richa Kothari*  
Dr. Richa Kothari

Dean  
School of Science ITM University  
School of Science (SOS) (M.P.)-INDIA-474001