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## Report of Academic Audit of School of Science (SOS) (2022-2023)

### **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 2833 Dated March 02, 2022. 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	√		Yes
	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	√		Yes
	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	√		Yes
	3	Evaluation of student's progress, communicating the progress to the parents and conducting parent-teacher meetings	√		Yes
	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	√		Yes
	6	Allocating students to the teachers for Research Projects, finalizing topics for research	√		Yes
	7	Preparing students' support system – planning remedial and coaching classes	√		Yes
	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	√		Yes
	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	√		Yes
	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	√		Yes
	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. The formal structure of curriculum development process and various bodies and sub bodies needs to be properly defined.
2. CO-PO mapping needs to be done with articulation matrix also PO and CO will be embedded and updated in the syllabus.
3. Outcome Based Education (OBE) should be effectively implemented and continually appraised. Outcome Based Education (OBE) workshops should also be conducted.
4. Policy for Outcome Based Education (OBE) needs to be created at the earliest.
5. Pool of Electives and Choice Based Credit System should be more strengthen.
6. Value added courses (VAC) should be of 30 hour duration, be outside the curriculum.
7. Policy on Teaching Learning and Value Added Courses (VAC) needs to be developed at the earliest.
8. Project Based Learning (PBL), ABCA activities and assignment schedule along with the submission date needs to be uploaded on LMS.
9. Teaching pedagogy and pedagogical tools were used in the curriculum but needs to be strengthened.
10. Student support system needs to be strengthened. A separate record needs to be prepared for remedial classes.
11. Upload the schedule of events on MIS portal prior to the commencement of new semester and after conduction of events, event report is also uploaded on MIS portal.
12. Upload the research papers, patents and chapters of faculty and students on MIS portal whenever they got published so that central repository should be maintained.
13. CO-PO and Blooms taxonomy levels will be embedded in the curriculum and also in the question papers.
14. Record of the student's achievements in terms of placement is maintained in the school.
15. More follow up should be required to declare the result within time limit.
16. Introduce the system of obtaining structured feedback from all stakeholders on a regular basis.
17. Policy on Interventions for slow and advanced learners needs to be developed.





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18. LMS when adopted can also provide the attainment matrix of CO/PO attainments based on OBE framework.
19. There should be formal system of sanctioning research projects based on the projected number of students for the ensuing academic year.
20. COE should formulate a structured Standard Operation Procedures (SOP) Manual or Guidelines to standardize the examination and evaluation processes/procedures.
21. The examination scheduling process is found to be in order. However, this process could be fully automated once the appropriate ERP system is implemented.
22. Faculty should be encouraged and incentivized to secure awards/recognitions.
23. The University Library should be made fully automated with requisite hardware.
24. 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.
25. 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.
26. Analyse of the final placements of students and identified the weak areas so that strategies for improvement will be developed.

Dr. K. V. Arya  
External Auditor

Dr. D. C. Gupta  
External Auditor

Dr. Ranjeet Singh Tomar  
Dean Academics

**Dean Academics**  
ITM University  
Gwalior (M.P.)

Dr. Omveer Singh  
Registrar  
REGISTRAR  
ITM University  
Gwalior (M.P.)



Ref: ITMU/DAO/2022-23/ 518 (3)

Date: 01-05-2023

To,

Dean

School of Science (SOS)

ITM University Gwalior, India

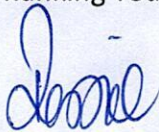
Subject: Regarding academic review report

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 Academics**

Dr. Ranjeet Singh Tomar  
Chairman, Academic Review Committee  
ITM University Gwalior (M.P.)  
ITM University Gwalior (MP)





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

<b>S. No.</b>	<b>Prescription</b>	<b>Action Taken</b>
1.	The formal structure of curriculum development process and various bodies and sub bodies needs to be properly defined	The formal structure of Curriculum Design and Development is developed
2.	CO-PO mapping needs to be done with articulation matrix also PO and CO will be embedded and updated in the syllabus	Existing curricula is mapped with CO-PO and embedded in the syllabus
3.	Outcome Based Education (OBE) should be effectively implemented and continually appraised. Outcome Based Education (OBE) workshops should also be conducted	Existing curricula is aligned with Outcome Based Education (OBE) frameworks. Outcome Based Education (OBE) workshops are regularly conducted
4.	Pool of Electives/Choice Based Credit System should be strengthen	Electives/Choice Based Credit System is created and in place in the University
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.	Teaching Learning policy and Value Added Courses (VAC) to be incorporated in the curriculum	Teaching Learning policy is developed and Value Added Courses (VAC) are incorporated in the curriculum
7.	Project Based Learning (PBL), ABCA activities and assignment schedule along with the submission date needs to be uploaded on LMS	Project Based Learning (PBL), ABCA activities and assignment schedule along with the submission date are uploaded on the LMS
8.	Teaching pedagogy and pedagogical tools were used in the curriculum but needs to be strengthened	More pedagogy and pedagogical tools are identified and are in place
9.	Student support system needs to be strengthened. A separate record needs to be prepared for remedial classes	Student support system is developed and planning to conduct the remedial classes in the University
10.	Upload the schedule of events on MIS portal prior to the commencement of new semester and after conduction of events, event report is also uploaded on MIS portal	Formal structure is developed for uploading the events and reports of events on MIS
11.	Upload the research papers, patents and chapters of faculty and students on MIS portal whenever they got published so that central repository should be maintained	Formal structure is developed for uploading the research work of faculty and students on MIS
12.	CO-PO and Blooms taxonomy levels will be embedded in the curriculum and also in the question papers	Existing curricula is mapped with CO-PO and embedded in the curriculum as well as in the examinations
13.	Record of the students achievements in terms of placement is maintained in the school	Record of students achievements in terms of placement is maintained in the school level





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14.	More follow up should be required to declare the result within time limit	University has developed the follow up mechanism to declare the results within time limit
15.	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
16.	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
17.	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
18.	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
19.	COE should bring out a structured Standard Operation Procedures (SOP) Manual or Guidelines to standardize the examination and evaluation processes/procedures	Standard Operation Procedures (SOP) Manual or Guidelines of Examination and Evaluation processes is brought and in place
20.	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
21.	Faculty should be encouraged and incentivized to strive for awards/recognitions	Research incentive scheme is in place and incentivized
22.	Library should be made fully automated with requisite hardware	Library is fully automated with all the necessary software and hardware
23.	The University should establish a Student Council which may not be an elected body	Student Council has been established
24.	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
25.	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
26.	Analyse of the final placements of students and identified the weak areas so that strategies for improvement will be developed	Analysis of final placements of students are in process and will try to develop the strategies for improvements in future placements

Dr. Yogesh C Goswami  
Dean

Prof. (Dr.) Yogesh C Goswami  
Dean  
School of Science (SQS)

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