

Date : Dec 16, 2022

Minutes of IQAC Meeting (10th) held on Dec 10, 2022 in HRD Room

An IQAC meeting (10th) was conducted on Dec 10, 2022 in HRD Room wef 11:00 am. The agenda of this meeting was :

S. No.	Agenda Point / Description
1	Observation of Internal Audit
2	Approval of Updated Formats (Academic Monitoring and Others)
3	OBE related work
4	Exam related reforms
5	Department Academic Calendar
6	Result Analysis (Yearly, for all years – I / II / III / IV – of 2021-22 session and Batch 2018-22 (passing-out in 2021-22)
7	CO-PO-PSO Attainment of 2018-22 (batch passing-out in 2021-22) with observation and measures to be taken during 2022-23
8	Work related to weak and bright students (Identification Criteria, List and Measures to be taken)
9	Work related to mentor – mentee (List of Mentors, List of Mentor-Mentee)
10	Record of Activities / Events Conducted during 2021-22 and Plan during 2022-23
11	Any other, as concerned – with the permission of Chair

Following personnel attended the meeting (including invitee) whose signed list (attendance) is attached herewith.

Sr. No.	Name	Designation
1	Shri Vishnu Saran	Chairman, MIET
2	Shri Puneet Agarwal	Vice Chairman, MIET
3	Mr. Vibhor Agarwal	Managing Director – Multimax Engineering work, Partapur
4	Dr. Brijesh Singh	Director
5	Dr. Bhawna Mallick	Dean Academics
6	Mr. Praveen Kumar Chakravarti	IQAC – Coordinator
7	Dr. Mukesh Rawat	Professor, Department of CSE
8	Dr. Vipin Kumar Garg	Professor, Department of Pharmaceutical Technology
9	Dr. Neha Mittal	Professor, Department of ECE
10	Dr. Deepak Yadav	Assistant Professor, Department of CHE
11	Dr. Shailendra Kumar	Professor, Department of ME
12	Mr. Avinash Kumar	Assistant Professor, Department of EE
13	Dr. Swati Sharma	Associate Professor, Department of IT
14	Mr. Gaurav Kashyap	Assistant Professor, Department of CIVIL
15	Dr. S.K. Soni	Assistant Professor, Department of MCA
16	Mr. Rockey Sachan	Assistant Professor, Department of MBA
17	Mr. Gaurav Goel	Associate Dean, First Year
18	Dr. Avinash Singh	Professor, Department of Bio Technology
19	Dr. Ashima Kathuria	Professor, Department of Bio Technology
20	Dr. Rambir Singh	Professor, Department of EE (for Dept of CSE-AI and CSE-AIML)
21	Mr. Suraj Bhatnagar	Professor, CSE-DS
22	Ms. Mohini P. Singh	Assistant Professor, Department of ECE (for Dept of CSE-IOT)
23	Mr. Rohit Aggarwal	Assistant Professor, Department of CSE

S. No.	Academic Format No.	Heading / Title / File Name	Brief Description
14	AM-09	AM_09A_Load_Req_Other_Dept	Teaching Load (Requirement) of other depts
15		AM_09B_Teach_Load_Dept	Teaching Load of the department concerned
16		AM_09C_Teach_Load_Classwise	Teaching Load (Class-wise) – All Subjects
17		AM_09D_Teach_Load_Facultywise	Teaching Load (Faculty-wise) – All Subjects
18	AM-10 (A / B)	MIET_AM_10a_Dept_Result_Analysis_Odd_Even	Result Analysis – Odd / Even Sem
19		MIET_AM_10b_Dept_Result_Analysis_Yearly	Result Analysis - Yearly
20	C01	C01_Mentor_Mentee_Details_Dept	List of Mentors and List of Mentor-wise Mentee
21	C02	C02_Weak_Bright_Performance_Record	List and Performance record of Weak and Bright Students with Measures Taken
22	C03	C03_Course_Content_30_AKTU_QP_Analysis_Dept	Important Course Contents based on AKTU QP Analysis
23	C04	C04_Feedback_Anlys_Rep_2022_23_P1_Odd_Dept	Feedback Analysis (Teaching and Learning) – Faculty-wise / Course-wise
24	C05	C05_Faculty_Research_Data_2022_23_Dept	Record-keeping Faculty Research Data
25	C06	C06_Students_Performance_Batch_2018_22_Dept	Compiled Record of Students Performance
26	C07	C07_Course_File_Check_List_All_2022_23	Checklist of Course File (to be prepared by respective course teacher for assigned all courses)
27	C08	C08A_Course_Handout_2022_Theory	Course Handout (Subject-wise for Theory and Lab courses both)
28		C08B_Course_Handout_2022_Lab	
29	QP Audit Form	MIET_Question_Paper_Audit_Form_2022_23	Questions Paper Audit Form (Internal Exams)
30	Award List	Award_List_CO_wise_Full_Syb_2022_23	Award List (submission of CO-wise marks of each assessment component)
31	Exam AT	MIET_Exam_Time_Attn_2022_23_Odd_CT1	Compiled Record of Attendance (Students appearing in Internal Exams)

4. Regarding the OBE, one workshop on Attainment Level, Assessment Tools and Assessment Methods, Pattern of Question Paper, Syllabus Coverage, COs, computation of CO-PO-PSO Attainment, Course End Survey and Graduate Exit Survey was conducted through mentor institute, i.e. NITTTR, Chandigarh on Sep 17, 2022. Its approved MOM are being circulated to all concerned on dated Sep 23, 2022 – to be followed wef 2022-23 session.
5. In line with all discussions and meetings held at institute level, IQAC suggested the updated OBE process to be followed wef 2022-23 session. The document is attached herewith. In addition to this, following are the major points for compliance / consideration :
 - a. In B Tech – I year, sections are formed by mixing students of various branches / programs and of different aptitude / knowledge / performance level, so as to improve their academic performance. With this, the measures taken to improve the academic performance will be same for entire B Tech – I year (irrespective of branch / program). Hence, the PO-attainment target for B Tech – I Year will be 100%.
 - b. The statement of COs, PEOs, PSOs etc. with mapping of CO-PO-PSO needs to be updated / reviewed (including framing of COs for newly introduced courses / skills / activities etc.) prior to the commencement of semester / session concerned. Refer MOM of HODs' meeting held on August 08, 2022.

S. No.	Document to be Verified for session 2021-22	B Tech - I Year (Chemistry Group)		B Tech - I Year (Physics Group)		Electrical Engg		IT and Allied		Electronics and Comm. Engg		MBA		MCA	
		Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks
1	AM-1 to AM-10 Formats –filled samples	yes	AM 08 is not applicable	Yes	OK	OK	Verified documents available	Yes	IT+DS+CSIT +HOT+AI+AIM L	Available & verified		OK		YES	
2	Departmental Committee list / Time Table File	yes		Yes	OK	Yes	verified	Yes	OK	Available & verified		OK		YES	Fac tab con lab il o m
3	Minutes of Meeting (MoM) File	yes		Yes	OK	Yes	verified	Yes	OK	Verified		OK		YES	
4	Mentor Mentee Records – Updated for all the students	yes		Yes	OK	Yes, excellent by maintained	their documentation can be an example for others	Yes	OK	Example & Verified		Not available		YES	F inc
5	Final Year Project Details – (List/Thesis Hard Copy/ Evaluation Details /Rubric's/Paper Publications by the students	NA		NA		Yes	Rubric for present sem. Yet to be done (assessment)	Yes	File OK, list available notice ok, paper Pub OK	Verified		OK		YES	St public Rub pr
6	Placement File	NA		NA		OK	OK	Yes	OK	Verified		OK		YES	offe availt joinir not a
7	Seminar / Workshop/ Guest Lecture / Industrial Visit/Any Technical Event – Organized by the department – Records to be verified	yes (Technical test)		Yes	OK	yes	industries visit 2021-22 could not be done as NBA work was	Yes	OK	verified (Publi - 23, Pat. Grant - 01, Pat. File 00, Proj file		OK		YES	

24/01/23

Meerut Institute of Engg & Tech, M
Internal Audit : 2021-22 (July-Aug :2023)

S. No.	Document to be Verified for session 2021-22	B.Tech - I Year (Chemistry Group)		B.Tech - I Year (Physics Group)		Electrical Engg		IT and Allied		Electronics and Comm. Engg		MBA		MCA	
		Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks
8	Paper Publication by the Faculty Member/Patent/Grant Received by faculty members – Needs Hard Copies	yes		yes	OK	yes 2 Papers	OK	Yes	OK	Verified		OK		YES	
9	Course Files	yes	well organized	Yes	OK	Yes	E-machine - Incomplete	Yes	OK	Available & verified		ok BUT NOT AVAILABLE CO-PO attainment		Yes	
10	Lab Files	yes		Yes	OK	Total 6 Labs OK	OK	Yes	See Correction are suggested (OK)	Verified		NA		Yes	
11	Samples Sessional & PUT Copies (Excellent, Good & Average)	yes		Yes	OK	YES	OK	Yes	OK	available		OK		Yes	
12	Samples Assignments	yes		Yes	OK	Yes	OK	Yes	Available (OK)	available		OK		Yes	
13	Student Feedback Analysis (About Teaching Learning/ Exit Feedback)	yes	Teaching learning only	Yes	Exit feedback not applicable	Yes	OK	Yes	Parents, Alumni	Verified		OK		Yes	
14	Attendance Register	yes		Yes	OK	OK	OK	Yes	OK	available		OK		Yes	
15	IOP/Add on course Record (Attendance, Assessment and Certificate)	yes		NA		Add on course research OK	10 IOP 2021-22 done - mapping not done as there is no clarity in Pos & CO	Yes	OK	available		OK	Certificate should be issue to participate	Yes	
16	Parent/Employer/Alumni Feedback Record and Analysis	NA		Parents feedback not available	Alumni feedback not applicable		NIL	Yes	OK (employer feedback available available).	available		Parent and employer feedback not available		Yes	Emp feedback available
17	Sessional and PUT Questions Paper file	yes		Yes	OK	OK	OK	Yes	OK	available		OK		Yes	

24/07/23

Meerut Institute of Engg & Tech, M

Internal Audit : 2021-22 (July-Aug :2023)

S. No.	Document to be Verified for session 2021-22	B Tech - I Year (Chemistry Group)		B Tech - I Year (Physics Group)		Electrical Engg		IT and Allied		Electronics and Comm. Engg		MBA		MCA	
		Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks
18	Industrial Visit/Industrial Internship record	NA		NA		Internship in III ye OK	OK	Yes	OK	Available & verified		OK		Yes	
19	Faculty Personal File-Updated	yes		Yes	ok	OK	OK	Yes	OK	available		OK		Yes	

Name and Signature of Auditors :

by 11/10

Meerut Institute of Engg & Tech, M
Internal Audit : 2021-22 (July-Aug :2023)

S. No.	Document to be Verified for session 2021-22	Bio-Technology		B Pharma		Chemical Engg		Civil Engg		Mechanical Engg		Computer Sc. and Engg	
		Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks
1	AM-1 to AM-10 Formats –filled samples	Available	OK	Yes & Verified	OK	AM - 1 Post received missing AM - 2 Not format other format ok	AM-04 missing AM-05 missing Sign missing			AM - I Updated Yes		Available	All AM formats are not available
2	Departmental Committee list / Time Table File	Available	OK	Yes & Verified		Yes		Committee list are not there (Responsibility list is present)		Updated DQAC with 11-12 Members		Available	Odd sem. deptt committee is not available
3	Minutes of Meeting (MoM) File	Available	OK	Yes & Verified		Yes		OK		Yes	Not orderly 21-22 mom not completed	Only even sem. Mom Available	Odd sem MOM not available
4	Mentor Mentee Records – Updated for all the students	Available	OK	OK		Yes		OK		Yes		Available	OK
5	Final Year Project Details – (List/Thesis Hard Copy/ Evaluation Details /Rubric's/Paper Publications by the students	Available	OK	Yes & Verified		file available	Notice, rubrics, Cos Attainment missing	Rubrics not available		Yes	Rubrics is available but rewards not available	Available	OK
6	Placement File	Available	OK	Yes & Verified		Yes		offer letter not complete			confidential date not shown	Soft file available	OK
7	Seminar / Workshop/ Guest Lecture / Industrial Visit/Any Technical Event – Organized by the department – Records to be verified	Available	OK	Yes & Verified		Yes	summary sheet missing	one technical event present		Yes		Available	OK

12/11/23

Meerut Institute of Engg & Tech, M
Internal Audit : 2021-22 (July-Aug :2023)

S. No.	Document to be Verified for session 2021-22	Bio-Technology		B Pharma		Chemical Engg		Civil Engg		Mechanical Engg		Computer Sc. and Eng	
		Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks
8	Paper Publication by the Faculty Member/Patent/Grant Received by faculty members – Needs Hard Copies	Available	OK	Yes & Verified		Yes	summary sheet missing	Not available in a single file they have merged with personal file			Not available	Available	Proof are available
9	Course Files	Available	OK	OK		Yes		Need to be revised as per index		Yes		Available	AM-03 & A-06 not available
10	Lab Files	Available	OK	OK		Yes	faculty sign missing	lab files are not proper (not evaluated)		Yes		Available	III, V & VI sem not available
11	Samples Sessional & PUT Copies (Excellent, Good & Average)	Available	OK	OK		Yes	matrix filling missing	marks matrix should be filled (comment in copy)		Yes		Available	odd sem not available
12	Samples Assignments	Available	OK	OK		Yes		OK		Yes		Available	OK
13	Student Feedback Analysis (About Teaching Learning/ Exit Feedback)	Available	OK	OK		Yes		only 3rd year exit feedback not available		Yes		1st year and 4th year available	OK
14	Attendance Register	Available	OK	OK		Yes	not proper (syllabus, TT not signed)	faculty TT hod sign		Yes		Available	Old sem requests not processed
15	IOP/Add on course Record (Attendance, Assessment and Certificate)	NIL	Not Available	OK		Yes		ok			Three IOPs are available No data is available	Available	no assessment and certificate available
16	Parent/Employer/Alumni Feedback Record and Analysis	Available	OK	OK		Yes		not available			not updated	Available	alumni feedback record & analysis not available
17	Sessional and PUT Questions Paper file	Available		OK		Yes	DQAC sign missing	it need to be rearranged		Yes		Available	OK

24/08/23

Meerut Institute of Engg & Tech, M

Internal Audit : 2021-22 (July-Aug :2023)

S. No.	Document to be Verified for session 2021-22	Bio-Technology		B Pharma		Chemical Engg		Civil Engg		Mechanical Engg		Computer Sc. and Engg	
		Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks	Availability	Remarks
18	Industrial Visit/Industrial Internship record	Available		OK		Yes					29 aug they will submit report & certificate 34 industrial visit	Available	industrial vi not availabl
19	Faculty Personal File-Updated	Available		OK		Yes	Not according to index, index not available	iqac should provide an index		Yes		Available	but files are not updated

Name and Signature of Auditors :

Signature

MENTOR – MENTEE / COUNSELLING FORM

Name : _____ Admission No : _____

University Roll No. : Gender : ☐ Male ☐ Female

Univ. Enrolment No.: Program : ☐ B Tech ☐ MBA ☐ MCA ☐ B Pharma
☐ M Tech ☐ M Pharma

Latest
Photograph

Branch : Section : Semester :

Date of Birth:

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 Religion :Category : ☐ General ☐ OBC ☐ SC ☐ ST

Blood Group : E-mail personal :

Email ID (College) :

Mobile: [] [] [] [] [] [] [] [] Counsellor / Mentor's Name (First Year) : _____ Signature

Signature _____

Counsellor / Mentor's Name (Dept.) :

Contact Details :

Permanent Address :		Address for communication with Parents :											
..... Pincode <table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>							 Pincode <table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>						
Mobile Number (Father)	Mobile No. (Mother)	Mobile No. (Student's own)	Verified by (Name & Sign)										

Present Address of Student :

Local Guardian's Name : Phone No. : Pincode :

Examination	Name of College	Board / University	Passing Yr	Passing %	Roll. No.	Medium
High-School						
10+2						

Hobbies :

Strength : Weakness :

Mention prolonged Disease / Illness (if any) :

FAMILY MEMBERS :

YEARLY INCOME :

Relation	Father	Mother	Brother / Sister	Brother / Sister	Brother / Sister

Session	Sem	the Course	From	Description / Title	(Cleared / or Not)	Discussion	Sign with Date	Mentor

DETAILS OF PROJECTS / GRANTS / SPONSORED RESEARCH (Keep Certificates / Letters in Record)

Academic Session	Sem	Title of Project	Funded / Self-sponsored	Details of Funding Agency, if any	Date of Discussion	Points Discussed	Student's Sign with Date	Sign of Mentor

ACHIEVEMENTS / AWARDS / COMMENDATIONS / PUNISHMENTS : (Keep Certificates / Notices in Record)

S. No.	Description / Details	Year (Date)

OBE based Academic Practices # 2022-23

Issue of Notice (IQAC) regarding review / update / framing of PEOs / PSOs (if applicable) / COs, CO-PO-PSO Mapping, Attainment Level and Assessment Tools etc.
(prior to commencement of academic session / semester)



Issue of Notice (DQAC) regarding review / update / framing of PEOs / PSOs (if applicable) / COs, CO-PO-PSO Mapping, Attainment Level and Assessment Tools etc.
(prior to commencement of academic session / semester)

And

Work Completion at Department Level through DQAC



Key Points regarding Assessment and Computation of Attainments

- ❖ Framing of Question Paper (CO-wise sections)
- ❖ Auditing of Question Papers (as per prescribed format through DQAC / Module Coordinator at Dept. Level)
- ❖ Conduct of Exams and Grievance Redressal, if any (through Central Exam Cell)
- ❖ Evaluation of Answer Sheets and its discussion with Students (in the class), Discussion on Solution
- ❖ Submission of CO-wise Marks (on prescribed Award Sheet, same mentioned on Cover page of Answer Sheet)
- ❖ Compilation of Marks (Students' Performance) in various Assessment Components (Sessional-I, Sessional-II, PUTs, Assignments / Quiz)
- ❖ Continuous Lab Evaluation
- ❖ Compilation of Marks (CO-wise) for various Assessment Tools
- ❖ Conduct of Course End Survey at the end of classes
- ❖ Computation of CO-attainment (as per prescribed method, upon declaration of AKTU End Sem result)
- ❖ Conduct of Graduate Exit Survey and other feedbacks / surveys
- ❖ Computation of PO-PSO Attainment
- ❖ Meeting of DQAC to analyse the Outcomes and Feedbacks to document Observations of PO-PSO Attainment and Planning of Measures to be taken to improve it further

Key Measures Taken at Central / Department Level

- ❖ Academic Calendar and Academic related works (Subjects' Choice, Course-Teacher Allotment, Time-tables, Conduct of classes and its monitoring, Students Attendance and its monitoring, Syllabus Progress Review and conduct of extra / revision / doubt clearing classes for timely completion of syllabus / to improve the academic performance of students,
- ❖ Innovative Teaching – Learning Practices, e-Notes / e-Lectures, Teaching Aids
- ❖ Work related to Mentor and Mentee
- ❖ Work related to Weak and Bright Students with Measures to be taken to improve their academic performance
- ❖ Identification of Curriculum Gap, Communicating University regarding Curriculum Gap and Planning of Measures to be Taken to fill the identified curriculum gap
- ❖ Planning of extra-curricular / co-curricular activities etc.
- ❖ Planning of workshops / seminars / guest lecture / elective courses / Value-added Courses / Online or MOOCs or SWAYAM Courses / Soft Skills / Communication Skills / Content beyond Syllabus / training of Skills or Technology or Coding Classes / Career Counselling / Competitive Exams' Classes (e.g. GATE) / Projects / Life-long learning / industrial trainings and visits etc.
- ❖ Planning to sensitize the students about cross-cutting issues like gender equality, environment and sustainability, human values and professional ethics etc. through relevant courses of curriculum and through community service / projects / participation in awareness programs / activities / events / exhibitions / competitions etc. even on socially relevant issues
- ❖ Planning for MOUs, compliance of related activities, work related to publications / book / book-chapters / patents / product development / course-material development / prototype development / research work / funded projects / consultancy / collaborative activities / IPR / interaction with outside world / Personality Development Programs / Training / Internship / Project related works (industry concerned / industry supported / social issues – nature – environment – energy concerned / multi-disciplinary etc.), Placement etc.
- ❖ Sensitization for AICTE IDEA Lab, Incubation and Innovation, Entrepreneurship etc.
- ❖ Academic Audit, Budget Preparation etc.
- ❖ Conduct of various Feedback and Surveys (Review of Questions, Data Collection, Analysis and Action Taken)
- ❖ Any other – as applicable / deemed / observed

Updated Outcome Based Education Practices and Computation of CO-PO-PSO Attainments : 2022-23

IQAC conducted a meeting of all the HODs to update / review / frame the Course Outcomes (COs) of all the courses concerned (covering all the courses – ongoing / newly introduced in current session), its mapping with POs and PSOs and attainment levels and assessment tools at department level (through DQAC), just prior to the commencement of semester / session (meeting date August 08, 2022, refer MOM dated August 09, 2022).

IQAC conducted a meeting to review / update the Assessment Tools, Attainment Levels, Assessment Methods, Students' Performance Evaluation, CO-wise Marks data Collection, Computation of CO-Attainment and Computation of PO-PSO Attainment etc. (workshop conducted by NITTTR, Chandigarh on Sep 17, 2022 under Margdarshak Scheme).

The OBE awareness sessions for all the faculty members were conducted on October 15 and 29, 2022.

In this respect, the updated details are as per following :

1. ASSESSMENT TOOL (2022-23)

1a. Assessment Tool : Theory Course

Subject Type	Assessment components	Assessment Method	Assessment Tool	Frequency per Semester
Theory (all COs)	Direct Assessment (80% weightage)	Internal Assessment (30%) weightage	Sessional-I; Sessional-II ; PUTs Assignment / Quiz	One One One One for each CO
		External Assessment (70% weightage)	University Examination	Once
	Indirect Assessment (20% weightage)	-	Course End Survey	Once

1b. Assessment Tool : Lab Course

Subject Type	Assessment components	Assessment Method	Assessment Tool	Frequency per Semester
Lab (all COs)	Direct Assessment (80% weightage)	Internal Assessment (30% weightage)	Quiz / Viva and Continuous Evaluation	At the end of course / After every experiment
		External Assessment (70% weightage)	University Examination	Once
	Indirect Assessment (20% weightage)	-	Course End Survey	Once

4. ATTAINMENT LEVELS (2022-23)

2a. Attainment Levels : Theory Course

Assessment Methods	Level	Range of Students in a class / branch with target marks
Direct Assessment (Internal Evaluation)	1	<50% student secure 60% marks
	2	>=50 <60% student secure 60% marks
	3	>=60% student secure 60% marks
Direct Assessment (External Evaluation)	1	<50% student secure 50% marks
	2	>=50 <60% student secure 50% marks
	3	>=60% student secure 50% marks
Indirect Assessment (Course End Survey)	To be conducted at 3-point scale and weighted method is to be considered for Attainment Value of Indirect Assessment	

2b. Attainment Levels : Lab Course

Assessment Methods	Level	Range of Students in a class / branch with target marks
Direct Assessment (Internal Evaluation)	1	<50% student secure 70% marks
	2	>=50 <60% student secure 70% marks
	3	>=60% student secure 70% marks
Direct Assessment (External Evaluation)	1	<50% student secure 70% marks
	2	>=50 <60% student secure 70% marks
	3	>=60% student secure 70% marks
Indirect Assessment (Course End Survey)	To be conducted at 3 point scale and weighted method is to be considered for Attainment Value of Indirect Assessment	

3. ASSESSMENT METHODS AND WEIGHTAGE

3a. Assessment Methods

To compute attainment value of COs, there are two type of assessment methods :

- Direct Assessment
- Indirect Assessment

Further, Direct Assessment includes

- Internal assessment (to be done at college level)
- External assessment (to be done at university level)

Assessment Components for Direct Assessment (Internal)

- Written Tests (Sessional Tests / Class Tests), Pre University Tests
- Home-assignments, Quizzes
- Presentations, Viva, Models, Projects, Development of Teaching Aids
- Research Article Review, Case Study, Open Problem
- Continuous Assessment of Lab Work
- Group of any few can be defined / considered for CO-attainment (group of assessment methods may vary from one CO to another within the same course and similarly, for other courses)

Assessment Component for Direct Assessment (External)

- End Semester Exams

Assessment Component for Indirect Assessment

- Course End Survey / Teacher's Feedback about the course

3b. Weightage of Assessment Methods

- The weightage of Direct and Indirect method is 80:20 percent.
- The weightage of Direct (Internal) and Direct (External) will be as per AKTU's Marks Scheme. The marks distribution of a subject as per AKTU's Teaching and Evaluation Scheme is as (any one) :

Total Marks of Subject = 150 (Internal Marks = 50; External Marks = 100)

Total Marks of Subject = 100 (Internal Marks = 30; External Marks = 70)

Considering higher side of external assessment; the weightage of Direct (Internal) and Direct (External) will be 30% and 70% respective. The same will be adopted for Lab.

4. UPDATING IN CONDUCT OF EXAMS AND CO-WISE MARKS DATA COLLECTION

4a. Key Points related to COs

- COs are the statements to be prepared using action verb as per Bloom's Knowledge Level. The Bloom's Knowledge Level (BKL) should be linked with the CO.
- COs should properly be mapped with relevant PO (in general, one CO may be mapped with 3-5 POs)
- These are to be measurable (quantitative manner) through Assessment Tools / components. Rubrics based evaluation is to be used to evaluate progress of work related to project / training / seminar.
- Internal Exams are to be conducted on a regular basis so as to evaluate students' performance and to take suitable measures to improve their academic performance. These internal exams (Sessionals, PUTs, Assignments, Quizzes etc.) are the component of assessment (Direct-Internal).
- For computation of CO-attainment, marks data should be available CO-wise (for all considered assessment methods / components / tools). Thus, exams (assessment components) are to be conducted CO-wise and the delivery of the course should also be CO-wise.
- IQAC is adopting AKTU's prescribed COs (COs prescribed by affiliating university) – which are similar content-wise (not from full syllabus; various from 4-7). For simplification / monitoring point of view, the COs should be same in all the theory / lab courses, which will be 5 per course.
- COs are to be updated / framed through respective faculty members and / or module coordinators (through DQAC). Further, assessment components / methods (Sessionals, PUTs, Home-assignments, Quizzes etc.) should be aligned with COs so that students' performance can be measured CO-wise (in terms of marks obtained in each CO separately) for considered assessment components / methods.

4b. Conduct of Exams for CO-wise Marks Data Collection (For Theory Course)

The assessment components to collect the students' performance data (CO-wise) so as to compute CO-attainment are as follows :

CO	Skill / BKL	Assessment Component	Remarks
CO-1	Bloom's Knowledge Level – Upto K4	Sessional-I, PUT, Assignment / Quiz	⇒ In Sessional's Question Papers, there will one section for each CO (having Internal Choice). With this, CO-wise students' performance can be measured. QP Format was shown.
CO-2		Sessional-I, PUT, Assignment / Quiz	
CO-3		Sessional-II, PUT, Assignment / Quiz	⇒ Syllabus Progress / Coverage is about 40% (2 COs) for Sessional-I and next 40% (2 COs) for Sessional-II. PUTs are from full syllabus.
CO-4		Sessional-II, PUT, Assignment / Quiz	⇒ In PUT's Question Paper, COs are to be mentioned against each question and students performance is recorded CO-wise. QP Format was shown.

CO	Skill / BKL	Assessment Component	Remarks
CO-5		Online Quiz, PUT, Assignment / Quiz	⇒ Assignment / Quiz is to be conducted CO-wise. ⇒ In each question paper (for each CO, to assess skill level), nearly 30% questions will be of K1-K2 Level, while remaining questions will be of K3-K4 level. One question of High Order Thinking Skill / Creativity may be given in each section (CO-wise), as a part of internal choice.

4c. Pattern of Question Papers (Sessionals and PUTs)

Exam Name (Direct-Internal)	Comments
Sessional – I (60 marks, 2 hours)	From 2 COs of the course, Two CO-wise Sections having internal (within the CO) choice, each CO or section is of 30 marks
Sessional – II (60 marks, 2 hours)	From other 2 COs of the course, Two CO-wise Sections having internal (within the CO) choice, each CO or section is of 30 marks
Pre-University Test (PUT, 100 marks, 3 Hrs)	From ALL 5 COs of the course, FIVE CO-wise Sections having internal (within the CO) choice, each CO or section is of 20 marks

With this, all COs (except 5th CO), are being evaluated at 30+20 = 50 Marks; while CO-5 is being evaluated at 0+20 = 20 marks. To make equal maximum marks for all COs, an ONLINE / OFFLINE Quiz of 30 marks (same contribution of CO in Sessionals) can be conducted prior to PUTs.

- Question Paper will have CO-wise sections / CO-wise distribution of questions. There will be internal choice (within the section or CO). In each section, distribution of questions should be =>
 - ⇒ Approx. 30-40% Questions (in terms of marks) should be of BKL 1-2 (K1 – K2) Level
 - ⇒ Approx. 60-70% Questions (in terms of marks) should be of BKL $\geq$ 3 (K3 onwards) Level
 - ⇒ Few questions should be of High Order Thinking Skills / Creativity etc.

4d. Quality of Question Papers / Assignments / Quizzes

To check the standard / relevance of questions and overall quality of the Question Paper, the framed Question Paper is to be audited at dept level through DQAC / Module Coordinators (prior to submission to Exam Cell). Further, questions mentioned in questions bank and / or given in assignments / quizzes need to be reviewed at department level (through module coordinator / DQAC) on random basis / sample basis.

4e. Conduct of Exams for CO-wise Marks Data Collection (For Lab Course)

For Lab Course, CO-Attainment of Direct (Internal) includes Continuous Evaluation (taking average value of all participating / mapped experiments) and Quiz / Viva (to be conducted CO-wise separately) for each CO. COs (3 to 5 in numbers) are being framed and mapped with few experiments – as concerned.

5. COMPUTATION OF CO-PO-PSO ATTAINMENTS

- ❖ For computation of CO-attainment, marks are compiled CO-wise (for all assessment methods / tools) and attainment is computed as per attainment level / assessment tool (considering Direct and Indirect methods, both).
- ❖ Course-PO-PSO attainment is computed based on Course-PO-PSO mapping value (weighted method).
- ❖ Further, PO-PSO attainment is computed based on Direct Method (average of Course-PO-PSO attainment) and Indirect Method (Graduate Exit Survey) with a weightage of 80% and 20% respectively.

Date : August 09, 2022

Minutes of HODs Meeting held on August 08, 2022 (wef 09:30 am in HR Room)

A meeting of all the HODs with IQAC and Director was held on August 08, 2022 in HR Presentation room wef 09:30 am. The agenda of this meeting was to brief about the academic audit and other issues related to academics. In this meeting, following personnel participated :

Sr. No.	Name	Designation	Department
1	Dr. Brijesh Singh	Director	
2	Dr. Sidharth Jain	Professor & HOD	ME
3	Mr. Madhur Kumar Dubey	Assistant Professor	ME
4	Mr. Gaurav Kashyap	Assistant Professor	CE
5	Mr. Avinash Kumar	Assistant Professor & HOD	EE
6	Dr. Bhupendra Sharma	Assistant Professor	EE
7	Dr. Balwinder N. Bedi	Professor & HOD	MBA
8	Dr. Kapil Sharama	Professor & HOD	MCA
9	Dr. Sunil Kumar Rajoriya	Professor & HOD	CH
10	Mr. Gaurav Goel	Associate Dean	1st Year
11	Dr. Nidhi Choudhary	Associate Professor	1st Year
12	Dr. Vikrant Varshney	Assistant Professor	EC
13	Dr. Subodh Kumar	Associate Professor	EC
14	Dr. Neha Mittal	Professor & HOD	EC
15	Dr. Swati Sharma	Professor & HOD	IT
16	Dr. Arvind Kushwaha	Professor & HOD	CSE
17	Dr. Avinash Singh	Associate Professor & HOD	BT
18	Dr. Ashima Kathuria	Professor	BT
19	Dr. Shalini Sharma	Principal	CCS
20	Dr. Vipin Garg	Professor	B.Pharm
21	Mr. Shailendra Kumar	Assistant Professor	CSE
22	Mr. Praveen Kumar Chakravarti	Assistant Professor & IQAC Coordinator	ECE

The outcome of the discussions held in the meeting were as follows :

1. Regarding the academic audit, the schedule and format with checklist was already shared to all the HODs by IQAC. All concerned were requested to do / cooperate in the audit work. As faculty members are engaged in exam related duties, so the Audit Team was requested to visit the department for one or two times more (other than regular schedule) prior to the finalization of the audit report.
2. HODs were requested to plan for the following (through their identified team) based on latest / emerging technologies enlisted in attachment (a part of curriculum gap / value addition / learning of new skills etc.) :
 - a. Awareness Program (Webinar, Seminar, Guest Lectures etc.)
 - b. Certificate Programs (FDP, Workshop, Training, Conference etc)

In these respects, Proposals are to be submitted for the funding as and when floated / informed (as per prescribed format of the funding agency / requirements).

3. All the HODs are requested to conduct the meeting of DQAC prior to the commencement of the session having following agenda :
 - a. Updating / framing of the COs
 - b. Updating of CO-PO-PSO mapping
 - c. Updating of Assessment Tools
 - d. Updating of Attainment Levels

The notice and MOM of such meetings are to be sent to the IQAC and undersigned in due course of time.

4. Member of proctorial board are to be deputed firstly on the basis of recommendation of DSW and further, HODs were requested to depute effective faculty member in Proctorial Board. Maintaining discipline in entire campus is our prime and foremost responsibility.

This meeting was adjourned at 10:00 am on August 08, 2022 with thanks to everyone. The minutes of meeting are approved by undersigned.

(Dr. Brijesh Singh)

Director

Copy for information and necessary action to :

1. Hon'ble Chairman and Vice Chairman
2. Dean - Academics
3. All the HODs, Associate Dean-Students Welfare, I/c - IQAC

List of Major Emerging / Latest Technologies

1. Artificial Intelligence
2. Machine Learning
3. Technologies for IoT
4. Technologies for IoE
5. Data Banks, Data Services and Data Analysis
6. Robotics
7. Autonomus Systems
8. Cyber Security and CS for Physical Infrastructure
9. Computer Vision, Augmented abd Virtual Reality
10. Device Technology and Materials
11. Speech, Video abd Text Analytics
12. Sensors, Networking, Actuators and Controls
13. Autonomus Navigation and Data Acquisition Systems (UAV, RoV etc.)
14. Data Analytics and Predictive Technologies
15. Technologies for Under Water Exploration
16. Human Computer Interaction
17. Cobotics
18. Technologies for Agriculture and Water
19. Technologies for Mining
20. Intelligent Collaborative Systems
21. Advanced Communication System
22. Bio-CPS
23. Data Science, Big Data Analytics and Data curation etc.
24. System Simulation, Modelling and Visualization
25. Cognitive Computing and Social Censing
26. Quantum Technologies
27. Positioning and Precision Technologies
28. Technologies for financial sector (Fintech)
29. Any other – as emerging

Minutes of HODs Meeting / Workshop held Online with NITTTR, Chandigarh**Under AICTE Margdarshan Scheme on Sep 17, 2022**

A Meeting / Workshop under AICTE Margdarshan Scheme with Prof. C. Rama Krishna (NITTTR, Chandigarh), Prof. Mala Kalra (NITTTR, Chandigarh) and Prof. Varaprasad (BMS College of Engineering, Bangalore) was conducted online (Google Meet ID # meet.google.com/odk-chhb-gra) on Sep 17, 2022. The agenda of this meeting / workshop was to get guidance on CO-PO-PSO attainment calculations. A faculty member / HOD from each department attended this meeting in Director's Office. The outcome of the discussion / workshop are as follows :

1. Regarding Attainment Levels

- a. Following attainment levels may be adopted for attainment computations :

Assessment Methods	Level	Range of Students in a class / branch with target marks
Direct Assessment (Internal Evaluation)	1	Upto (<) 50% student secure TARGET marks
	2	>=50 <60% student secure TARGET marks
	3	>=60% student secure TARGET marks
Direct Assessment (External Evaluation)	1	Upto (<) 50% student secure TARGET marks
	2	>=50 <60% student secure TARGET marks
	3	>=60% student secure TARGET marks
Indirect Assessment (Course Exit Survey)	Data to be collected through 3-point Likert Scale Feedback (Rubric based; Excellent / Good / Poor) To be computed as per point 1d.	

- b. The TARGET Marks for Direct (Internal) Assessment will be decided on higher side of average marks obtained in Sessional Marks (appeared in AKTU End Sem Result, as Internal Marks). Example :
- If, average Sessional (Internal) marks are less than 50%, then TARGET Marks will be 50%.
 - If, average Sessional (Internal) marks are 50-60%, then TARGET Marks will be 60%.
 - If, average Sessional (Internal) marks are 60-70%, then TARGET Marks will be 70%; and so on.
- c. The TARGET Marks for Direct (External) Assessment will be decided on higher side of average marks obtained in AKTU End Sem Exams (as external marks in AKTU End Sem Result). Example :
- If, average End Sem marks are less than 50%, then TARGET Marks will be 50%.
 - If, average End Sem marks are 50-60%, then TARGET Marks will be 60%.
 - If, average End Sem marks are 60-70%, then TARGET Marks will be 70%; and so on.
- d. Indirect Assessment will be done through conducted COURSE END SURVEY (by the concerned course teacher at the end of the semester, for theory and lab courses - both), on a 3-point Likert Scale (Rubrics based : Excellent / Good / Poor, for all COs). The computation of Indirect attainment is as follows :

Attainment Value of Each CO

$$= [(3 \times \text{Students Count for Excellent}) + (2 \times \text{Students Count for Good}) + (1 \times \text{Students Count for Poor})] / \text{Total No. of Students}$$

Attainment Value of Indirect Assessment (on a scale of 3) = Average of Attainment value of all COs

2. Regarding Framing of Course Outcomes (COs) and Assessment Tools Employed

- a. For Theory Course : The shown COs were framed based on similar course contents / particular content of syllabus (part). The institute is affiliated one and syllabus is prescribed by AKTU (with content-wise COs). These are in line with assessment methods. The teaching of course content in the class-room and syllabus progress with its monitoring is content-wise. With this approach, the assessment components to collect the students' performance data (CO-wise) so as to compute CO-attainment are as follows :

CO	Skill / BKL	Assessment Component	Remarks
CO-1	Bloom's Knowledge Level – Upto K4	Sessional-I, PUT, Assignment / Quiz	⇒ In Sessional's Question Papers, there will one section for each CO (having Internal Choice). With this, CO-wise students' performance can be measured. QP Format was shown.
CO-2		Sessional-I, PUT, Assignment / Quiz	⇒ Syllabus Progress / Coverage is about 40% (2 COs) for Sessional-I and next 40% (2 COs) for Sessional-II. PUTs are from full syllabus.
CO-3		Sessional-II, PUT, Assignment / Quiz	⇒ In PUT's Question Paper, COs are to be mentioned against each question and students performance is recorded CO-wise. QP Format was shown.
CO-4		Sessional-II, PUT, Assignment / Quiz	⇒ Assignment / Quiz is to be conducted CO-wise.
CO-5		Online Quiz, PUT, Assignment / Quiz	⇒ In each question paper (for each CO, to assess skill level), nearly 30% questions will be of K1-K2 Level, while remaining questions will be of K3-K4 level. One question of High Order Thinking Skill / Creativity may be given in each section (CO-wise), as a part of internal choice.

- b. Regarding point 2a, Expert suggested that COs are to be framed from full syllabus (not dividing the entire course into parts / modules / sub-modules / similar contents etc.), having different skills (Bloom's Knowledge Level, as per skill set, K1 / K2 / K3 / K4 / K5 etc.) with its evaluation. CO-1 to CO-4 (Skill K1 to K4) can be evaluated through internal written exams, while CO-5 (skill - K5) can be assessed through mini projects etc.

Assessment Tools for CO(cont...)

❖ Subject: Computer Networks-5 COs

Mid exam:25

Assignment:5

Course outcome	Skill	PO	Bloom's	Assessing tools can be used to measure CO
CO1: Ability to define, understand and explain concepts of computer networks	Remember Understa	AICTE Exam reform Learning Outcomes	Understanding	Exam/assignment (5 marks)
CO2: Ability to apply the concepts of computer networks for a given scenario.	Apply			Exam/assignment (10 marks)
CO3: Ability to analyse given scenario and use appropriate network protocol / technique.	Analyse			Exam/assignment (10 marks)
CO4: Ability to investigate various network protocols/ techniques available in literature and submit report in a team	Investigate			Assignment (3 marks)
CO5: Ability to make an effective written documentation on security issues followed in computer network	Security, communication			Group assignment
			lower level Blooms	Assignment (2 marks)
				Individual assignment

- c. Regarding point 2a, experts said that at initial level (for understanding the OBE system), above said method (as per point 2a) may be followed and later, you can switch to framing of COs from full syllabus and doing evaluation as suggested by them (as per point 2b).
- d. The weightage of Direct and Indirect Assessment Methods will be 80% and 20%. This will be followed for Theory and Lab courses both. This was consented by the experts.

- e. The weightage of Direct (Internal) and Direct (External) will be as per AKTU's Marks Scheme. The marks distribution of a subject as per AKTU's Teaching and Evaluation Scheme is as :

$$\text{Total Marks of Subject} = 150 \text{ (Internal Marks} = 50; \text{ External Marks} = 100)$$

Considering higher side of external assessment; the weightage of Direct (Internal) and Direct (External) will be 30% and 70% respective. The same will be adopted for Lab. This was consented by the experts.

- f. For Lab Course, CO-Attainment of Direct (Internal) includes Continuous Evaluation (taking average value of all participating / mapped experiments) and Quiz / Viva Component (to be conducted CO-wise separately) for each CO. COs (3 to 5 in numbers) are being framed and mapped with few experiments – as concerned. This was explained to the experts.

3. Regarding Target Level of POs

- a. Prepare Course CO (course-wise - average of all COs) – PO Mapping Table for all the courses concerned (of entire curriculum) and take average of all participating cell of CO (PO-wise). Example :

S. No.	Course No	Course Name	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
1	C-101		2.67		2.0			1.67						
21	C-201			2.0										
32	C-301		2.0											
56	C-409		3.0		3.0									
PO-Target Level (3)			2.34	2.0	1.50			1.67						

Calculation : Target Level for PO-1 (on a scale of 3)

$$= \text{Average of participating cell of Course's CO-PO Mapping Table} = (2.67 + 2.0 + 3.0) / 3 = 2.34$$

- b. Year-wise, PO-target level should be increased by 5% to 10%.

4. Regarding Attainment of POs and PSOs

- a. For PO / PSO Attainment (Direct) : Compute the PO-attainment (Direct) for individual course. For this, first prepare Course's CO-PO Mapping Table and put value of CO-attainment in the mapped cells (same value in all mapped cells) and then calculated weighted value. This is as per following (example) :

Course # C-101; Let => CO-attainment value of the course (on a scale of 3) is 2.4

S. No.	Course No	Course Name	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
1	C-101 (CO-attainment Value)		2.4		2.4			2.4						
2	C-101 (CO-PO Mapping Value)		2.67		2.0			1.67						
	PO-Attainment (Direct)		2.14		1.60			1.34						

Calculation for Attainment of PO (for course C-101) - Direct

$$= (\text{CO-Attainment Value of the Course Concerned (as obtained)} \times \text{Course's CO-PO Mapping Value}) / 3$$

$$\text{Attainment of PO-1} = 2.4 \times 2.67 / 3 = 2.14$$

$$\text{Attainment of PO-3} = 2.4 \times 2.0 / 3 = 1.60$$

- b. These PO-attainment (Direct) values (for a course) are to be put in Course-wise CO-PO Mapping Table (replacing CO-PO mapping values by PO-wise obtained attainment values). Refer the following :

S. No.	Course No	Course Name	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
1	C-101		2.14		1.60			1.34						
27	C-209		2.17		2.2			1.22						
36	C-306													
56	C-409		2.41		2.21									
PO-Attainment (Direct)			2.24											

Calculation for PO-Attainment (Direct)

= Column-wise Average of all participating cells (PO-wise)

Calculation for PO-Attainment (Direct) # PO-1 => (2.14 + 2.17 + 2.41) = 2.24

- c. For PO-attainment (Indirect) assessment, conduct Graduate Exit Survey (Program End Survey) at the end of the program (final year passing-out students) on a 3-point Likert Scale (Rubrics : Excellent / Good / Poor). The same is to be followed for PSO attainment (Indirect). For its computation, follow the procedure as discussed in point 1d, which is :

PO-Attainment (Indirect) value (on a scale of 3) for any PO or PSO is :

= [(3 x Students Count for Excellent) + (2 x Students Count for Good) + (1 x Students Count for Poor)] / Total No. of Students

- d. Final PO / PSO attainment (on a scale of 3) will be computed having 80% weightage to PO-Attainment (Direct) and 20% weightage to PO / PSO Attainment (Indirect). This is as follows :

S. No.	PO / PSO Attainment	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2
1	Direct (80%)	2.24		1.60			1.34								
2	Indirect (20%)	2.55		2.2			1.22								
PO-Attainment		2.30		1.72			1.32								

Calculation for PO / PSO – Attainment (Overall, On a scale of 3)

= (0.8 x 'PO / PSO – Direct Attainment') + (0.2 x 'PO / PSO – Indirect Attainment')

Calculation for PO-Attainment # PO-1 => (0.8 x 2.24) + (0.2 x 2.55) = 2.30

5. Regarding Measures to be Taken

- a. Tabulate the Target Level of PO and its attainment.

S. No.	PO / PSO Attainment	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
1	Target Value	2.34		1.60			1.34						
2	Attainment	2.30		2.2			1.22						

- b. Suitable measures are to be taken if PO-attainment (as attained) is less than PO-target level.

6. Academic Audit

- a. Experts suggested that an academic audit (internal and external) should be conducted on yearly basis.

The entire workshop was very informative, experts were very supportive and experts address all the queries raised from MIET side. The meeting was adjourned with thanks to everyone. The minutes of meeting are prepared by Dr Brijesh Singh, Director, MIET and are approved by Prof. Mala Kalra and Prof. C. Rama Krishna (NITTTR, Chandigarh).

Brijesh Singh 26/9/2022 ----- Approved by email dated Sep 24, 2022 -----
(Dr. Brijesh Singh) (Prof. Mala Kalra) (Prof. C. Rama Krishna) (Prof. Varaprasad)
Director, MIET NITTTR, Chandigarh NITTTR, Chandigarh BMS CE, Bangalore

Copy for information and necessary action to :

- ⇒ Prof. Mala Kalra, Prof. C. Rama Krishna and Prof. Varaprasad
- ⇒ Director, IQAC and all the HODs of MIET