

DESIGNING A TABLE OF SPEC & THE PREPARATION OF QUALITY EXAMINATIONS



*Advanced Teaching Method Course
(ATMC)*

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BY:

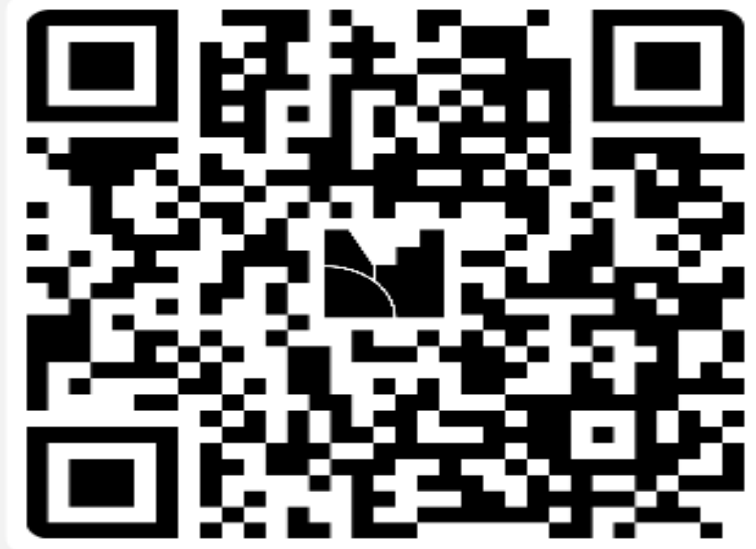
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Learning Outcomes

Participants will be able to:

- Design TOS aligned with CLOs and Cognitive Levels
- Develop examination questions that are valid
- Differentiate between easy, moderate, and difficult questions using cognitive levels and content complexity
- Construct balanced examination papers based on the TOS



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Two-Layer Assessment Specification

Layer 1: Test Blueprint

- Course level planning

Layer 2: TOS

- Exam level planning

Why Blueprint and TOS?

- Ensure CLO coverage
- Balanced exams
- Easier moderation
- Accreditation evidence
- Valid assessment

Blueprint vs TOS

Blueprint:

- Whole course
- CLO distribution
- Assessment weightage

TOS:

- Individual exam
- Question mapping
- Marks distribution

Essential Components of Test Blueprint

- Course Information
- CLO Alignment
- Assessment Components
- Weightage Distribution
- Topic Coverage
- Cognitive Planning

Blueprint Quality Checklist

- CLOs covered
- Weightage correct
- Assessment methods appropriate
- Topics represented
- Total = 100%

Essential Components of TOS

- CLO alignment
- Topic
- Hours of interaction
- Weightage
- Cognitive Level
- Marks
- Question Number
- Item Type

TOS Quality Checklist

- CLO mapped
- Topics covered
- Marks correct
- Bloom appropriate
- Matches Blueprint

A TOS is prepared to ensure that an examination is:

- aligned with the **Course Learning Outcomes (CLOs)**
- balanced across **topics taught**
- fair in terms of **marks and difficulty**
- clear in terms of **question format**

Step-by-step instruction to prepare TOS

Step 1: List all relevant Course Learning Outcomes (CLOs)

- Begin by identifying the CLOs that will be assessed in the examination.
- **What to do:**
- Refer to the course outline.
- Select only the CLOs that are intended to be measured in that particular test or final exam.
- Write the CLO codes clearly, for example:
 - CLO1
 - CLO2
 - CLO3

Step-by-step instruction to prepare TOS

Step 2: Identify the topics to be covered in the exam

- List the content areas or topics that have been taught and are relevant for assessment.
- **What to do:**
- Refer to the teaching plan or lecture schedule.
- Write the main topics or subtopics included in the examination.
- Ensure the topics are relevant to the CLOs selected.

Step-by-step instruction to prepare TOS

Step 3: Determine the hours of interaction for each topic

- Record how much teaching and learning time was allocated to each topic.
- **What to do:**
- Check the teaching schedule.
- Write the number of lecture/tutorial/practical hours spent on each topic.
- Topics with more hours usually receive greater emphasis, though not automatically more marks without academic justification.

Step-by-step instruction to prepare TOS

Step 4: Assign weightage for each topic or CLO

- Decide the percentage of importance given to each topic or CLO in the examination.
- **What to do:**
- Allocate weightage according to:
 - importance of the topic
 - amount of coverage in teaching
 - significance of the CLO
- Ensure the total weightage adds up to **100%**

Step-by-step instruction to prepare TOS

Step 5: Decide the cognitive level for each part

- Determine the Bloom's Taxonomy level required for each topic or question.
- **What to do:**
- Match each topic or CLO with the intended cognitive level, such as:
 - C1 Remember
 - C2 Understand
 - C3 Apply
 - C4 Analyse
 - C5 Evaluate
 - C6 Create
- Ensure the cognitive level suits the course level and learning expectations.

“Are your questions testing thinking...
or just memory?”

Step-by-step instruction to prepare TOS

Step 6: Allocate marks

- Determine how many marks will be given for each topic or question.
- **What to do:**
- Convert weightage into actual marks.
- Ensure marks distribution is consistent with:
 - topic importance
 - CLO emphasis
 - cognitive demand
- Check that the total marks equal the full exam marks, for example 40 or 100.

Step-by-step instruction to prepare TOS

Step 7: Assign question numbers

- Match each planned section of the TOS with actual question numbers in the examination paper.
- **What to do:**
- Label each item clearly, for example:
 - Q1
 - Q2(a)
 - Q2(b)
 - Section A, Question 3
- Make sure every question in the exam appears in the TOS.

Step-by-step instruction to prepare TOS

Step 8: Decide the item type

- State the format of each question.
- **What to do:**
- Choose the suitable item type, such as:
- MCQ
- Short Answer Question (SAQ)
- Essay
- Structured Question
- Case-based question
- Problem-solving question
- Select the format based on the CLO and cognitive level

Step-by-step instruction to prepare TOS

Step 9: Check alignment and balance

- Review the completed TOS before finalising the exam.

What to check:

- Are all intended CLOs covered?
- Are the topics adequately represented?
- Do the hours of interaction justify the weightage?
- Are the cognitive levels balanced?
- Do the marks add up correctly?
- Do the question numbers match the exam paper?
- Are the item types suitable?

TABLE OF SPECIFICATION (TOS) FOR FINAL EXAM, SEM 1 2025/26

COURSE CODE: EDGC1501

COURSE TITLE: INDIVIDUAL APPRAISAL

Table A:

CLOs	Topics / Units	Hours of Interaction	Weight (%)	Cognitive Level	Marks	No. of Items	Question Types
			0				
			0				
			0				
			0				
	TOTAL	0	0		0		

LEGEND:

C1 – Remembering (Low Order)

C2 – Understanding (Low Order)

C3 – Applying (Moderate Order)

C4 – Analysing (Moderate–High Order)

C5 – Evaluating (High Order)

C6 – Creating (Highest Order)

Table B: Exam Format

Section	Question Types	# of items	Marks	Cognitive Level
A				
B				
C				

Table C:

		LOW ORDER THINKING (LOT)		MODERATE ORDER THINKING (MOT)		HIGH ORDER THINKING (HOT)	
		C1	C2	C3	C4	C5	C6
Marks							
%							
%		0		0.0		0.0	

Workshop Activity

Participants will:

- develop a TOS for one of their own courses

CLOSING

Teaching experience alone is not enough.

Because in the end...

it is not what we teach that defines learning
but what we assess.

CLOSING

“An exam is not just a paper.
It is a *decision-making tool*.

Every mark we give...

decides who passes

who graduates

who becomes a professional”

CLOSING

“So the real question is —

**Are we making the right decisions about our
students?”**

CLOSING

“When assessment is misaligned,
the consequence is not just weak results...
it is *misleading conclusions* about our students’
abilities.
and that... is a responsibility we cannot take
lightly”

CLOSING

Today, TOS is not just a table.

It is:

a tool for fairness

a tool for transparency

a tool for accountability

CLOSING

TOS allows us to say:

👉 ‘Yes, this student deserves this result
— and I can defend it.’

CLOSING

Because in higher education,
we are not just teaching students to pass exams...
we are preparing them to face the real world.

And they deserve an assessment
that truly reflects what they are capable of

CLOSING

In our amanah as educators,
every judgment we make carries accountability —
not only to the institution,
but ultimately to Allah.

So let our assessments be just,
accurate,
and meaningful.

CLOSING

Assessment is not about
marks.

It is about *truth*.