بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Purpose of Bachelor Education & OBE System

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1. **Welcome to IQAC**

2   **A beautiful campus, where both Teachers & Students can devote themselves to create knowledge.**

3. What is quality education?

Quality Education determine whether the graduates coming out of institutions achieved the expected standard in terms of skills, attitudes & values that meet their potential as human beings and members of society.

There are **Two main purposes** for Attaining Quality in Higher Education:

(a) To attain outcomes in terms of Knowledge, Skills and Attitudes so that graduate are being able to meet the needs of stakeholders;
(b) To improve institutional Capacity &Process to facilitate the attainment of Intended Learning Outcomes(ILOs).

4. Intended Learning Outcomes(ILOs):

The course ILO involves the following:

1. What role does this course play within the major?
2. How is the course unique or different from other courses?
3. Why should/do students take this course?
4. What essential knowledge or skills should they gain from this experience?
5. What knowledge or skills from this course will students need to have mastered to perform well in future classes or jobs?
6. Why is this course important for students to take?

5. Learning Objectives

i. What knowledge, skills, and values should students acquire from their educational experience?
ii. How will this experience pay off employment, societal contribution, and quality of life?
iii.   Are the objectives best on the needs of actual or potential students rather than some ideal students?
iv. Are the objectives requires skill & competence, not just Knowledge and understanding ?
    Learning objectives are assumed to be mastering the discipline's core facts and concepts.

6. Purposes of Bachelor Education

According to DerckBok(2006), there are eightcore purposes of undergraduate education:
i.Learning to communicate, ii. Learning to think,iii.Building character,iv. Preparation for citizenship,v. Living with diversity,vi.Preparing for a global society,vii.Acquiring broader interests and viii.Preparing for a career.

Ref: Bok, D.(2006).Our under achieving Colleges: Princeton , NJ: Princeton University Press.

7. **Purposes of Bachelor education- Contd.:**
   i. **Learning to communicate**: *Learning to write and speak.* "Expressing oneself with clarity, precision, & if possible , style and grace."

   ii. **Learning to think**: *Critical thinking , quantitative reasoning.* "Asking appropriate questions, recognizing & defining problems, identifying the arguments on all sides of an issue , searching for and using relevant data, and arriving in the end at carefully reasoned judgments. "

   iii. **Building Character**: *Learning moral reasoning, strengthening the will to act morally.* "Students shall learn to think more carefully about ethical problems by having discussions on dilemmas that arise frequently in personal and professional life".

   iv. **Preparation for citizenship**: *Countering apathy, developing informed choices.* "The distinctive role of civic education shall help the students to learn enough knowledge to make the thoughtful , informed choices that enlighten citizenships requirements."

   v. **Living with diversity**: *Race, ethnicity, and gender.* "Broadening experience and improving critical thinking through response to different values & perspectives. A successful democracy demands tolerance and mutual respect."

   vi. **Preparing for a global society**: *International subjects, foreign languages, international students, education abroad.* " Building the ground work for international expertise, responsible citizenship, travel abroad, and understanding one's own country."

   vii. **Acquiring broader interests:** *General education, extracurricular activities.* "Awakening intellectual interests and helping students understand the world and their place in it with greater understanding than achievable through study in a single area."

   viii. **Preparing for a** career: Choosing a career, acquiring work-related knowledge and skills. "Reconciling study in liberal arts subjects with the need to prepare for life-shaping work."

8. **GRADUATE PROFILE (UGC, Oct. 2012)**
   The Graduate Profile is a description of the personal qualities, skills and attributes a student is expected to obtain by the end of an undergraduate degree program at the University.
   Minimum Performance Level for Graduates:
   1. Intellectual skills matching with program of study, 2.Practical & problem solving skills, 3. Numeracy & analytical skills,4. Entrepreneurship and innovation skills,
   5. Communication & ICT skills ,6. Interpersonal, teamwork & leadership skill
   7. Self management & personal development skills, 8. Commitment to community, country & humanity

9.Engineering Graduates of IIUC shall attain the following POs by the time of graduation(BAETE).

NO#	Prtogram Outcomes(PO)
PO1	Engineering Knowledge (Cognitive)
PO2	Problem Analysis (Cognitive)
PO3	Design/Development of Solutions (Cognitive, Affective)
PO4	Investigation (Cognitive, Psychomotor)
PO5	Modern Tool Usage (Psychomotor, Cognitive)
PO6	The Engineer and Society (Affective)
PO7	Environment and Sustainability (Affective, Cognitive)
PO8	Ethics (Affective)
PO9	Individual Work and Teamwork (Psychomotor, Affective)
PO10	Communication (Psychomotor, Affective)
PO11	Project Management and Finance (Cognitive, Psychomotor)
PO12	Life-Long Learning (Psychomotor, Affective)

10. Vision & Mission of IIUC

Vision of IIUC

To make IIUC as the Centre of Excellence in the field of Shari'ah , Business, Science, Engineering and Technology, Arts & Humanities, Law and Social Sciences. IIUC cherishes the dream of becoming one of the highest seat of learning and creating knowledge in the South East Asia.

Mission of IIUC

1. To produce properly trained up manpower to contribute to socio-economic development and moral upliftment of the society,
2. To cultivate expertise among the students as well as sensitivity and intelligence,
3. To have an ability to think freely beyond their areas of study, who shall sustain justice in all walks of life.

Motto of IIUC is to "Combine Quality with Morality."

11. Teaching Methods at IIUC

Methods: IIUC has OBE & Bi- Semester system ofCQI through Continuous Evaluation Process& external review. In this process student are evaluated throughout a course of study rather than examination at the end of it. It is multidimensional based on student's
(a) Attendance in the Classes, b. Performance in Assignments and Class Tests ,
(c) Scores in the Mid-Term and the Final Examination, (d) Lab. Reports, (e) Thesis/ Project/ internship, (f) Presentations ,(g) Viva-voce ,(f) Industry visits, (g) Co-Curricular and Extra-curricular activities .

12. Policy

IIUC has Integrated Education Policy, where a student achieves holistic learning through awareness of his surroundings and other relevant knowledge bases. IIUC emphasizes the diffusion of scientific, technical and professional knowledge on the one hand, & building up of character in youth by making religion and ethics an integral part of education on the other. In this regard, there are some courses for the students of all Faculties at IIUC, which are not a part of the main curriculum of the Departments.

IIUC incorporates studies on the values of mutual respect & peaceful co-existence in the courses under the "Morality Development Program (MDP)" which includes all students of the university irrespective of caste, creed or religion.

IIUC supports student participation in a broad array of *Co-Curricular and Extra-curricular activities* as an integral component of its commitment to student life and success.

13. Marks Distribution

Sl.#	Description	Marks
1	Attendance in the classes Class attendance ≤60% is Dis-Collegiate. Barred from attending in the Final Exam. in that course	10%
2	Performance in Assignments & Class Tests	10%
	Midterm-Exam.	30%
3	Final Examination: A student found absent in semester Final Exam, will deemed to have failed the course irrespective of marks obtained in class-test +attendance+ Mid-term	50%
4	N.B.The courses in which a student has obtained minimum D, i.e Grade Point=2' (40% mark) in 'Theoretical courses' 'Laboratory courses & General Viva-voce' or higher grade will be counted as credits earned by the student. For Graduation CGPA must be 2.5 .	

14. Marks in Class Attendance

Attendance	Awarding Marks
90% and above	10
85% to less than 90%	9
80% to less than 85%	8
75% to less than 80%	7
70% to less than 75%	6
65% to less than 70%	5
60% to less than 65%	4
less than 60%	**0 (Not to be allowed for examination)**

15. Purposes of Quality in Higher Education

There are two main purposes for Attaining Quality in Higher Education:

(a)   To attain outcomes in terms of Knowledge, Skills and Attitudes, so that graduate are being able to meet the needs of stakeholders;

(b)   To improve institutional Capacity & Process to facilitate the attainment of Intended Learning   Outcomes (ILOs).

For Quality in Higher Education , IIUC already adopted Outcome-Based Education (OBE) system. It is an educational process that focused at achieving certain specified outcomes in terms of individual student learning. By this time, OBE-Syllabuses has been introduced at IIUC.

16 Components of OBE:

Mission & vision of the University, the Faculty & Program ; Program Educational Objective (PEO) & Program Outcome (PO) ; Course Outcome (CO) & Student Learning (SLO); Stakeholders; Curriculum & Course module; Assessment & Evaluation; Continuous Quality Improvement (CQI) Process; Mappings of SLO to PEO, PEO to Mission, CO to   PO
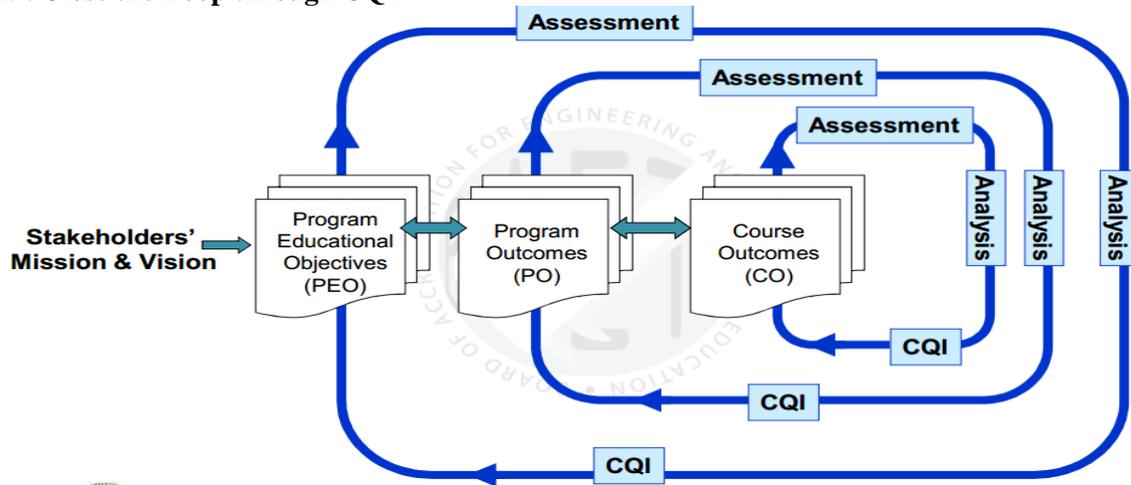
17. Process in OBE

Process in OBE
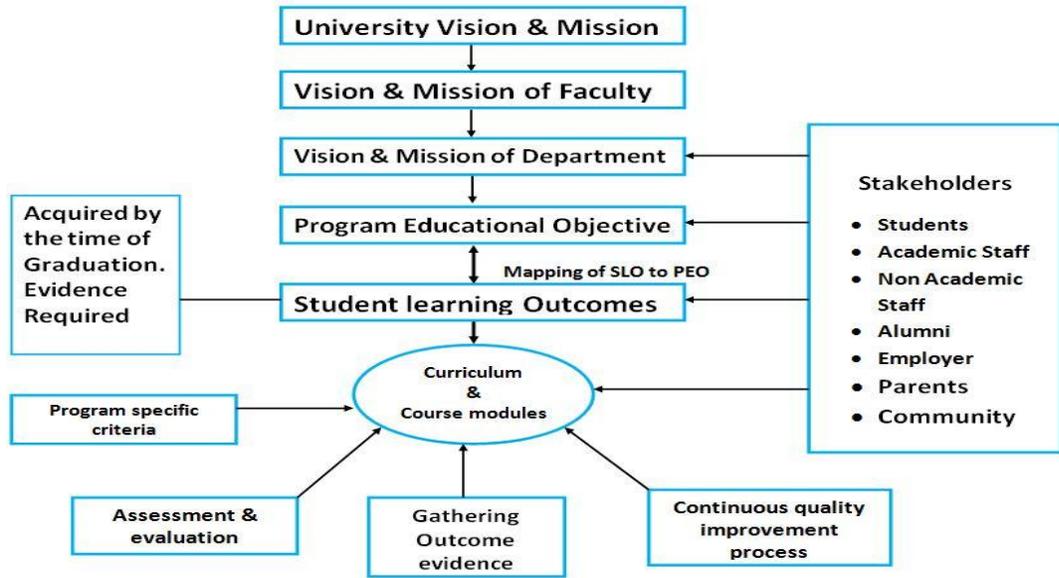
18. Cycle of OBE
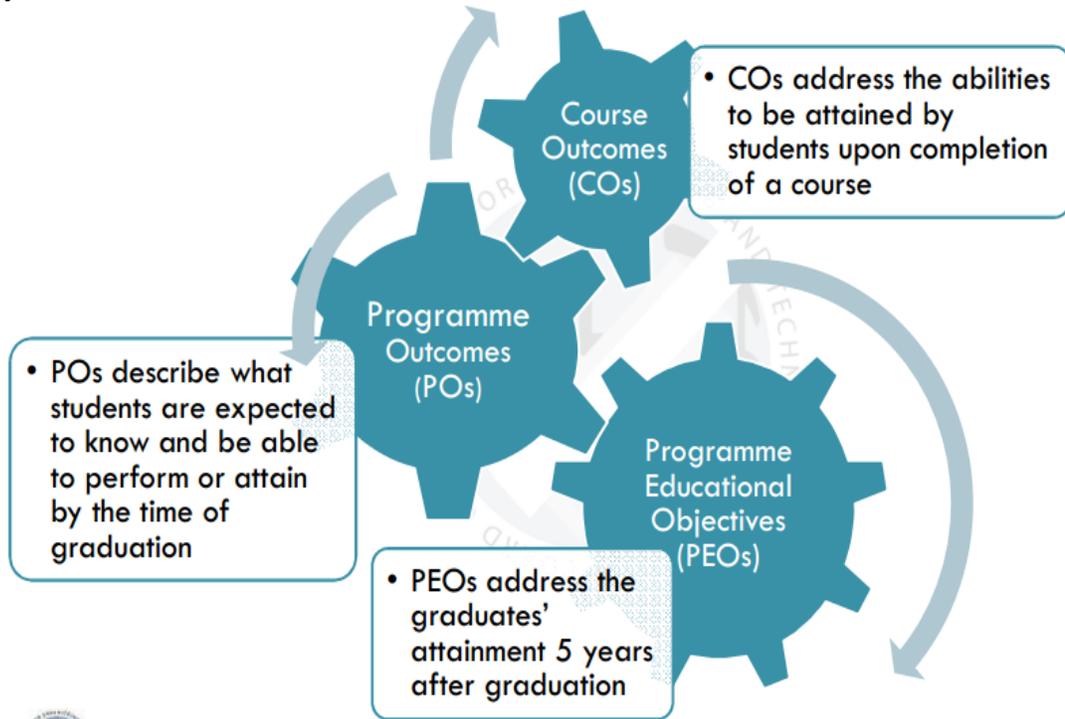
19. Close the Loop through CQI

19.a Course Outcome

08. PHY-1204				Course Title: Physics Sessional	
S/N	**Course Outcomes (COs):** Upon the successful completion of the course, students will be able to	Corresponding POs	Bloom's taxonomy domain/ level	Delivery methods & activities	Assessment tools
CO-1	Demonstrate an ability to make physical measurements and report writing	**PO-1**	Cognitive/ Applying	Lecture, White Board Writing, MMP,Practical Demonstration, Data Collection, Data Analysis, Report Writing,Q/A,dis cussion	Quizzes, Assignment, Lab Report, Lab Test
CO-2	Demonstrate the ability to use experimental statistics to determine the precision of a series of measurements.	**PO-2,**	Cognitive/ Analyzing,		Lab Exams Table Viva
CO-3	Conductexperiments on resistivity measurement and report writing	PO-4	Psychomotor/ Manipulation		Lab reports Lab Exam

20. Relationship between Po's ofB.Sc in EEE and IIUC Mission Statements

Program Outcomes (POs)	Program Educational Objectives (PEOs)			
	PEO-1 : Success in Electrical Engineering Fields	PEO-2 : Industrial awareness & research	PEO-3 : Successful employment & professional ethics	PEO-4: Being a leader in professional & societal environment
PO1: Engineering Knowledge	Yes	Yes	Yes	
PO2:Problem Analysis .	Yes	Yes		
PO3: Design/Development of Solutions	Yes	Yes		
PO4: Investigation	Yes	Yes		
PO5: Modern Tool Usage.	Yes	Yes		
PO6: The Engineer and Society		Yes	Yes	Yes
PO7: Environment and Sustainability			Yes	Yes
PO8: Ethics			Yes	Yes
PO9: Individual Work and Teamwork		Yes	Yes	Yes
PO10: Communication		Yes	Yes	Yes
PO11:Project Management and Finance		Yes	Yes	Yes
PO12: Life-Long Learning			Yes	Yes

**20b. Table 3 Relationship between PEOs of B.Sc. in EEE, IIUC and IIUC Mission Statements.**

No	PEO Statement	Institutional Missions		
		IIUC mission statemen-1	IIUC mission statemen-2	IIUC mission statemen-3
PEO-1	Success in Electrical Engineering Fields	Yes	Yes	-
PEO-2	Industrial awareness and Research	Yes	Yes	-
PEO-3	Successful employment and professional ethics	-	-	Yes
PEO-4	Being a leader in professional and societal environment	-	Yes	Yes

## 21. Method of Assessments

- There are two methods to assess the course outcomes:
    1. Direct method
    2. Indirect method
- Direct method displays the student's knowledge and skill for their performance in continuous internal assessment tests, semester examinations, seminars, and classroom and laboratory assignments etc. These methods provide a sampling of what students know and/or can do and provide strong evidence of students' learning.
- Indirect method such as survey and interview ask the stakeholders to reflect on student's learning.

A scale of 1 to 4 is used to evaluate the degree of attainment of the performance criteria. CO is considered acceptable (i.e. target achieved) if at least 50% of the students are at Satisfactory i.e. Obtained 60% marks..   .

21. Projection to PEOs
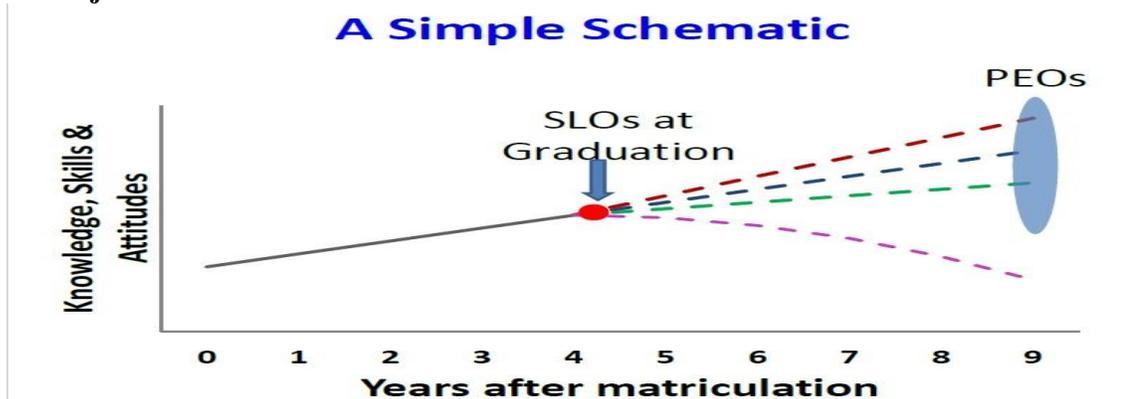
22. Internal Quality Assurance System in General
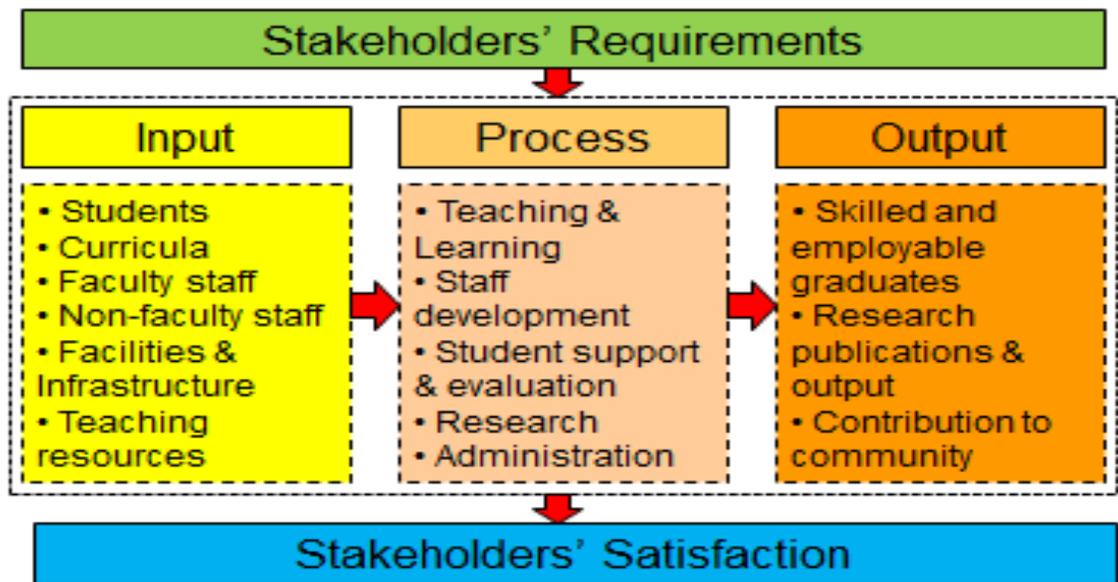
23. Learning outcomes

Outcomes from any educational system are:

  i. Performance indicators such as test results, completion rates, post-course employment rates, etc.

  ii. Outcome expressed in terms of what students know, are able to do by the time of graduation.

Learning outcomes could result from a program, a course, a chapter or a section of a chapter.

After the Completion of	What the students would
A program	Program Outcomes(POs)or Student Outcomes(SOs)
A Course	Course Learning Outcomes(CLOs)
A chapter	Learning Outcomes(Los)
A section/Topic of a Chapter	A Section/Topic Learning Outcomes(COs)

24. Traditional Education System

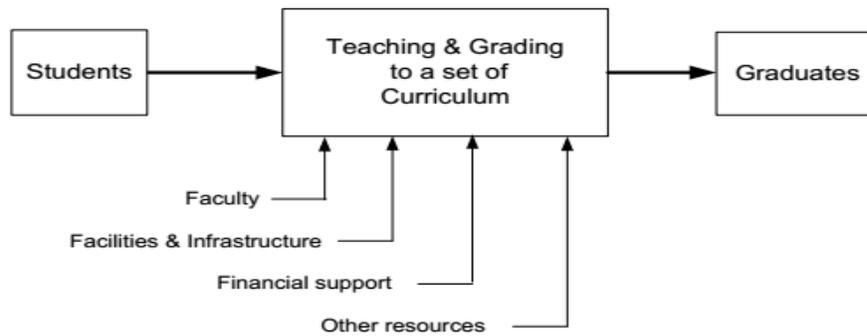Good Students + Adequate Resources = Good Graduates

Figure 1 – Premise of traditional education system

25. Deficiencies of Traditional Education

Following are the deficiencies of Traditional Education System:
- Provides students with a learning environment with little attention to whether or not students ever learn the material.
- Gives students grades and rankings compared to each other, thus students become examination oriented or CGPA driven.
- Does not prepare the Graduates completely to   make them as the work force.
- Lacks of emphasis on soft skills required for the   jobs e.g. communication skills, interpersonal skills, analytical skills, etc.

26. Taxonomy of Learning: The Three Domains (Bloom)

Bloom's Taxonomy was created in 1956 under the leadership of educational psychologist Dr Benjamin Bloom in order to promote higher forms of thinking in education, such as analyzing and evaluating concepts, processes, procedures, and principles, rather than just remembering facts (rote learning). According to Bloom's Assessment involves:

1. **Cognitive** is for mental/intellectual sk**ills** (**Knowledge**)
2**. Affective** is for growth in feelings or emotional areas (**Attitude**)
3. **Psychomotor** is for manual or physical skills (**Skills**).

27. Classification of Learning		
Cognitive (Knowledge)	**Affective (Attitude)**	**Psychomotor (Skills}**
6. Creating	5. Characterization	5. Naturalization
5. Evaluating	4. Organization	4. Articulation
4. Analyzing	3. Valuing	3. Precision
3. Applying	2. Responding	2. Manipulation
2. Understanding	1. Receiving	1. Imitation
1. Remembering	-	-

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27. Bloom's Taxonomy for process of learning

Bloom's Taxonomy in its various forms represents the following process of learning.

Step 1: First we must remember a concept.

Step 2: Before we can understand the concept we must remember it .

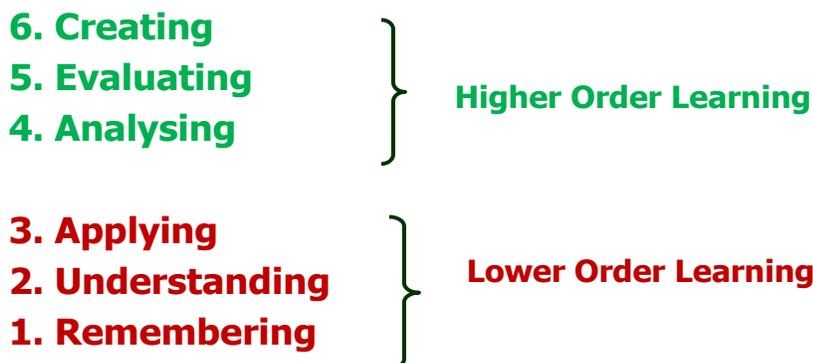Step 3: Before we can apply the concept we must understand it .

Step 4: Before we analyze it we must be able to apply it.

Step 5: Before we can evaluate its impact we must have analyzed it.

Step 6: Before we can create we must have remembered, understood, applied, analyzed, and evaluated.

28. Knowledge Domain

Six sub-domains of Knowledge domain:

6. Creating

5. Evaluating

4. Analysing   **Higher Order Learning**

3. Applying

2. Understanding

1. Remembering   **Lower Order Learning**
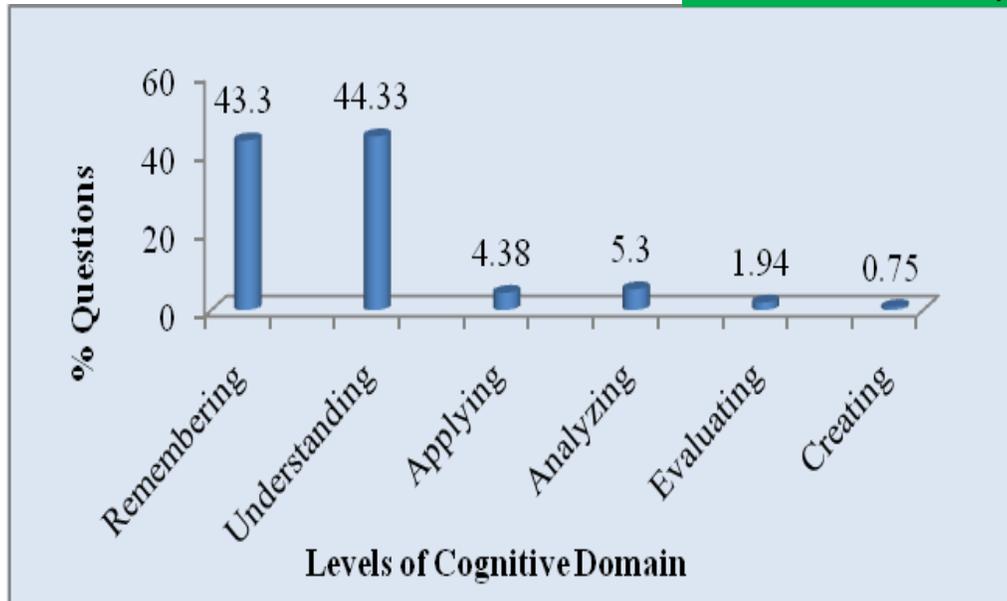
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29. Average status of undergraduate questions in respect of cognitive domain of Bloom's Taxonomy in a Public University (Sessions: 2008-09 to 2011-12)


30. Comparison of Bloom's Taxonomy in Cognitive Domain

Comparison of Bloom's Taxonomy in Cognitive Domain

Cognitive Level	Educational Objectives	Learning Ability	Revised by Anderson, et. (2001)
# 1	Knowledge	List, Define, Identify, Recognize.	Remember
# 2	Comprehension	Explain, paraphrase, Describe, Differentiate, Discuss.	Understand
# 3	Application	Calculate, solve, determine, Apply.	Apply
# 4	Analysis	Classify, Predict, Model, Derive, Interpret, Categorize.	Analyze
# 5	Synthesis	Propose, create, invent, design, Improve.	Evaluate
# 6	Evaluation	Judge, select, critique, justify, Optimize.	Create

31. Cognitive Domain
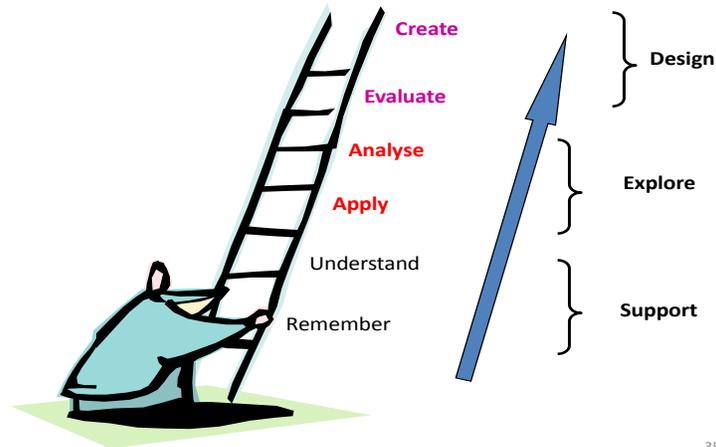
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33. Cognitive Domain (Knowledge):Practical Use

Category	Definition	Key Words
Remem bering	**Can the student recall or remember the information?**	**Define, duplicate, list, memorize, recall, reproduce, state**
Under standing	**Can the student explain ideas or concepts?**	**Classify, describe, discuss, explain, identify, locate, recognize, report, select, translate, paraphrase**
Applying	**Can the student use the information in a new way?**	**Choose, demonstrate, daramatize, employ, illustrate, interpret, operate, schedule, sketch, solve, use, write**
Analyzing	**Can the student distinguish between the different parts?**	**Appraise, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, test**
Evaluating	**Can the student justify a stand or decision?**	**Appraise, argue, defend, judge, select, support, value, evaluate**
Creating	**Can the student create new product or point of view?**	**Assemble, construct, create, design, develop, formulate, write**

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34. Affective Domain (Attitude): Practical Use

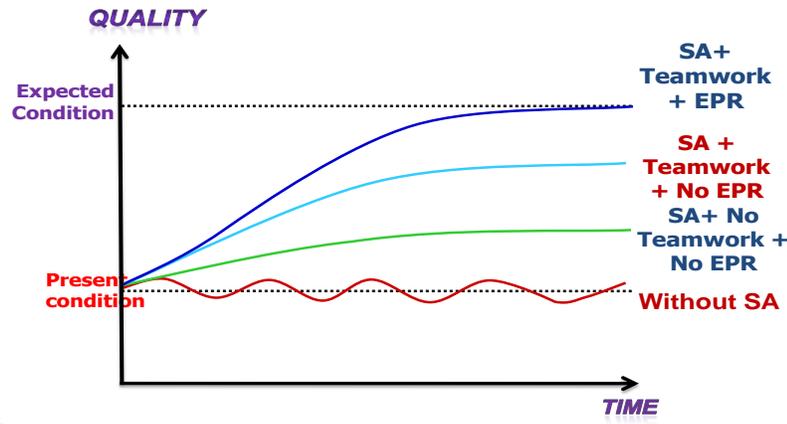| Category	Definition	Key Words and Examples
Receiving	Awareness, willingness to hear, selected attention.	Observe, be conscious, realize, be sensitive, attend, listen, discriminate
Responding	Learning outcomes may emphasize compliance in responding, willingness to respond or satisfaction in responding (motivation).	Willing, comply, obey, look, engage, practices rspond, prefer. accept, devote, is loyal to, consider, exhibit, participate, enrich, explore, conforms
Valuing	The worth or value a person attaches to a particular object, phenomena, or behaviour.	Examples: Is sensitive towards individual and cultural differences (value diversity), shows ability to solve problems. Key Words: assume responsibility, initiate, examine, differentiate, justify, enable
Organization	Organizes values into priorities by contrasting diffeent values, resolving conflicts between them, and creating an unique value system.	Examples: Accepts responsibility for one's behaviour. Accepts professional ethical standards. Key Words: Weigh, defend, explain, formulate, generalize, untergarte
Characterization	The behaviour is pervasive, consistent, predictable, and most importantly, characteristic of the	Examples: Shows self-reliance when working independently. Cooperates in group activities. Key Words: examine, judge, revise, solve, verify, discriminate, influence, listen, propose.

35.Psychomotor Domain (Skills): Practical Use

Category	Definition	Description
Imitation	Observing and patterning behaviour after someone else.	Copying
Manipulation	Being able to perform certain actions by following instructions and practicing.	This is the beginning of doing the task or learning the idea on ones own. This is done through repitition as someone else.
Precision	Refining, becoming more exact.	This is where the trainer gets out of the way because the trainee has learned the task or idea so that it can be done without mistakes or hesitation. This is the "getting out of the way" stage.
Articulation	Coordinating a seris of actions, achieving harmony and internal consistency.	This is done through the trainee being so versed in the movements of the learned task or idea that they can now manipulate the task or idea in ways that makes it work with more than one action.
Naturalization	Having high level of performance become natural, without needing to think much about it.	Taking the actions from the conscious to the subconscious. This is when the action becomes to natural to the trainee that no thought is put into the work....it's just done without thought.

36. A Matrix of Knowledge Domain

The Knowledge Domain	Remember	Understand	Apply	Analyze	Evaluate	Create
Facts	List	Para-phrase	classify	outline	rank	Categorize
Concepts	recall	explains	show	contrast	criticize	modify
Processes	outline	estimate	produce	diagram	defend	design
Procedures	reproduce	Give an example	relate	identify	critique	plan
Principles	State	converts	solve	differentiate	conclude	revise
Meta Cognitive	proper use	interpret	discover	infer	predict	actualize

37. Impact of SA Exercise/Teamwork

Impact of SA Exercise/Teamwork

QUALITY

SA+
Teamwork
+ EPR

Expected
Condition

SA +
Teamwork
+ No EPR

SA+ No
Teamwork +
No EPR

Present
condition

Without SA

TIME

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38. Survey Form to be filled by Students

Following online Survey Form to be filled by students at the time of Course Completion :

1. Teacher Evaluation Report (TER)Form .
2. **Student Course Evaluation Form**
3. Exit survey FOR Outgoing   STUDENTS

39. Procedure for online fill up.

1.   Please browse IIUC website using a browser (Chrome or Mozilla or others)
2.   Co to Menu "IQAC" and then click on "Students Course Evaluation Form" under feedback menu.
3.   Then you would get a page/online-form which is needed to fill up and submit.
4.   Pls. input Text at Semester Name, Metric no. Student Name, Mobile Number (11 digit) & email Select Department Name and fill up your current status.
5.   Then give your sincere opinion as per instruction for each segment using radio button form 5 to l.
6.   At the bottom, you would get three text fields. Just type your opinion as per instruction in these fields.
7.   Input Verification code from your mobile
8.   Tick "l am not Robot", tick all relevant images and verify. If verified then a Green tick will appear.
9.   Finally, click on submit button.

40.Course Evaluation by students

SL #	Please give your views so that course quality can be improved. You are encouraged to be sincere and constructive in your comments	1	2	3	4	5
1	I had enough prior knowledge to be able to follow the course.					
2	The Course outcomes in the course plan clearly describe what I was expected to learn in the course.					
3	The course structure (as divided into lectures, exercises, lab sessions, simulations etc.) is appropriate in order to reach the intended course outcomes of the course.					
4	The teaching of the course worked well.					
5	The course literature (including other course material) supported the learning well and were up-to-date.					
6	The assessment (including all compulsory elements, exams, assignments etc.) tested whether I had reached the intended course outcomes of the course.					
7	The course workload as related to the number of credits was relevant.					
8	The overall environment in the class was conductive to learning.					
9	What is your overall impression of the course?					
10	I would recommend this course to a fellow student.					

There are five level of scores: 1= Strongly Disagree ; 2= Disagree ; 3=Neither Agree nor Disagree ; 4= Agree; 5= Strongly Agree.

41. To be followed

- **To be a good citizen**: You should be sincere, hard-working, co-operative and have a good foundation in values, ethics and cultural understanding.
- **To be a good leader**: Develop a thirst for knowledge by reading Books/Newspapers. Every day improve your academic quality by self competition. Develop friendships.
- **To serve the nation**: Set your mind that you have to serve the nation by making yourself a positive character of society.
- **To be honest in the academic work**: Do not to write anything on the walls/on the desks or copy during examination. Do not give proxy on behalf of your friend in the class. It is a crime. Uphold moral standards. Cherish corruption free mind.
- **To maintain discipline**: Discipline must be maintained by holding law abiding attitude in every sphere of life.
- **To Learn cleanliness in all respects**: Contribute to keep a neat and clean environment in all respect and maintain healthy life style.
- **To be respectful**: Learn to respect teacher, guest, friend and even visitors. Take a gift for your parent when you go home .
- **Learning to communicate**: Success at university education depends on how well you can use the things that you learn at IIUC, which can be transferred to your everyday life & future.
- **There is a formula of Success**: $S = I \times E$. Intelligence(I) is constant for individual, it may be zero but effort(E) is variable, which is a function of time, hard work, planning, discipline and honesty.
- **Be attentive in the class**: If you don't understand something, raise your hand and ask questions. The more questions you ask, the smarter you'll get, believe it or not. So for better understanding you have to learn, to ask question in the classes. This will help you as well as your classmates and teacher to increase knowledge. Remember, you are in the arena of higher education when the future is full of opportunities and promises.

42. Struggling Hard To Survive

Running alone
within the boundary
ignoring global trends…
resulting no progress

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43. I am winning, I shall win everyday.
I shall continue it unless I win.

We shall enjoy at the end (Insha Allah)

One step per Semester

44.Conclusions

Students are expected to be able to do more challenging tasks other than to memorize and reproduce what taught.

- Students should be able to write project proposals, complete projects, analyze case studies, give case presentations, show their abilities to think, question, research, and make decisions based on the findings. Be more creative, able to analyze & synthesize information.
- Students are able to plan and organize tasks, able to work in a team as a community or in entrepreneurial service teams to propose solutions to problems and market their solutions.
- In this regard, all of us should be more self-conscious about quality and more continuously involved in its improvement by self- assessment & competition.

- May Allah (s.w.t) bestow us all with best of Tawfique.

Thank you

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