

AQA Report of Year 2021-2022



Office of Accreditation and Quality Assurance (AQA)
Islamic University of Technology (IUT)
A subsidiary organ of the Organization of Islamic Cooperation (OIC)
Board Bazar, Gazipur 1704, Bangladesh

June 2022

Creating Global Citizens with Islamic Values

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1. Introduction

In the 21st century, global development has been emphasized by innovation through science and technology. Therefore, it is essential for the Islamic world to march forward in the right speed with the contemporary developed or fast developing countries. Thus, it is indispensable to educate IUT students with breadth and depth of knowledge of the relevant subjects as well as skills related to application or use of modern equipment or tools or software. Islamic University of Technology (IUT) was established by the Organization of Islamic Cooperation (OIC) to attain this paramount goal.

As per the aspiration of the OIC member states, IUT is also looking forward to become a unique and prestigious multicultural hub of higher learning in engineering, technology and relevant fields through offering of the state-of-the-art multi-and-inter-disciplinary programs and cutting-edge research for sustainable development of these states and the world. It is essential as its graduates will play pertinent roles for solving complex engineering and technological problems. As the global problems are becoming more and more complicated, therefore, it is obligatory to take steps to enhance the present status of IUT through quality education and research.

IUT recognizes that accreditation is a mandatory requirement for mobility of its graduates globally. IUT has been taken initiatives to get accreditation of different academic programmes from local and international bodies. In the meantime, Bachelor of Science in Civil Engineering (B.Sc. in CE) program has been accredited with grade A (the highest possible grade) for a period of five years by the Board of Accreditation for Engineering and Technical Education (BAETE), a body recognized by the Washington Accord in Bangladesh. IUT also has taken initiative for getting accreditation of its academic programmes from international bodies, such as Accreditation Board for Engineering and Technology (ABET). To achieve this goal, IUT is gradually shifting to outcome based education (OBE) via problem-based learning (PBL). However, keeping global competitiveness in mind, IUT needs to upgrade its current policies and practices holistically.

The OIC Strategic Agenda 2026, Astana 1-11, 2017 focused on many issues including quality education, science and innovation, skill development, sustainability, wellbeing of the society, quality of higher education and research, etc. The OIC 2025 – Programme of Action also focused on science, technology, and innovation, protection of environment, capacity development, institutional reforms, etc. of OIC Member states. The Charter of the OIC has also covered sustainable socio-economic development. The United Nations (UN) has formed a blueprint for peace and prosperity for people and the planet for now and into the future through 17 Sustainable Development Goals (SDGs) related to society, economy, wellbeing, and environment. IUT is an international university established for the capacity development of the OIC member states and beyond. Therefore, IUT needs to take initiatives to fulfill the policies as specified in OIC Strategic Agenda 2026, OIC 2025 – Program of Action, OIC Charter, and SDGs of the UN. For this reason, Office of Accreditation and Quality Assurance (AQA) was reformed in September 2020 so that quality of education can be ensured through implementation of OBE and getting accreditation from Board of Accreditation for Engineering and Technical Education (BAETE) and Bangladesh Accreditation Council (BAC).

2. Formulation of AQA and SAC Committee

The Office of Accreditation and Quality Assurance (AQA) was reformed in September 2020 with a goal to establish and ensure quality culture in the university benchmarking with other local and internationally reputed universities. To run AQA, a committee comprising of members from each department of IUT was formed in October 2020. Details of the committee are summarized in **Table 1**. Again, another committee for each of the departments named Self-Assessment Committee (SAC) was formed in March 2021. Details of the committee are summarized in **Table 2**. Since the reactivation of AQA in September 2020, a draft manual related to Quality Assurance was prepared; the shortcomings related to the quality education and accreditation were identified and circulated in the departments. The whole team (AQA-SAC) is working for establishing

quality education in IUT and subsequently accreditation of different programs of IUT. In the meantime several training programs covering outcome based education (OBE), knowledge domain with Bloom's taxonomy, different outcome of OBE, such as course outcome (CO), program outcome (PO), and program educational objectives (PEO), assessment tools for outcome, attainment of outcomes, importance of interaction with industries, writing self-assessment report (SAR), modern teaching-learning method, complex engineering problems, complex engineering activities, open-ended activities in lab, health and safety issues in laboratories and offices, etc. were carried out.

Table 1 – AQA Committee

Dr. Md. Tarek Uddin, PEng.	Professor, CEE, Head-AQA
Dr. Shakil Mohammad Rifaat	Professor, CEE, Member-AQA
Dr. Md. Kamrul Hasan	Professor, CSE, Member-AQA
Dr. Md. Shahadat Hossain Khan	Professor, TVE, Member-AQA
Dr. Md. Fokhrul Islam	Professor, EEE, Member-AQA
Dr. Mohammad Ahsan Habib	Professor, MPE, Member-AQA
Dr. Md. Abul Kalam Azad	Associate Professor, BTM, Member-AQA

(Not in the order of seniority)

Table 2 – Self-Assessment Committee (SAC)

Dr. Shamsuddin Ahmed	Professor, MPE, Member-SAC
Dr. Md. Hamidur Rahman	Professor, MPE, Member-SAC
Dr. Arafat Ahmed Bhuiyan,	Assistant Professor, MPE, Member-SAC
Dr. Mohammad Tawhid Kawser	Professor, EEE, Member-SAC
Dr. Ashik Ahmed	Professor, EEE, Member-SAC
Dr. Rakibul Hasan Sagor	Professor, EEE, Member-SAC
Md. Hasanul Kabir	Professor, CSE, Member-SAC
Dr. Hasan Mahmud	Assistant Professor, CSE, Member-SAC
Mr. Shohel Ahmed	Assistant Professor, CSE, Member-SAC
Ms. Naznin Akter	Assistant Professor, BTM, Member-SAC
Ms. Shobnom Munira	Assistant Professor, BTM, Member-SAC
Mr. Md. Abdullah Al Mamun	Lecturer, BTM, Member-SAC
Dr. Faruque Ahmed Howlader	Professor, TVE, Member-SAC
Dr. Abdullah Al Mamun	Professor, TVE, Member-SAC
Dr. Mahbub Hasan	Assistant Professor, TVE, Member-SAC
Dr. Md. Rezaul Karim	Professor, CEE, Member-SAC
Dr. Hossain Md. Shahin	Professor, CEE, Member-SAC
Dr. Nazmus Sakib	Assistant Professor, CEE, Member-SAC

(Not in the order of seniority)

3. Roadmap with Activities Related to OBE and Accreditation

A roadmap (as shown in Fig. 1) with OBE related activities has been prepared and circulated among the AQA-SAC members. This roadmap will help the programs for preparing of SAR and submission to BAETE for accreditation. AQA has a plan to make visits to each department to motivate/supervise/review the activities related to OBE. As per this roadmap, the programs are preparing themselves for accreditation based on OBE based curriculum, teaching-learning activities and assessment, etc.

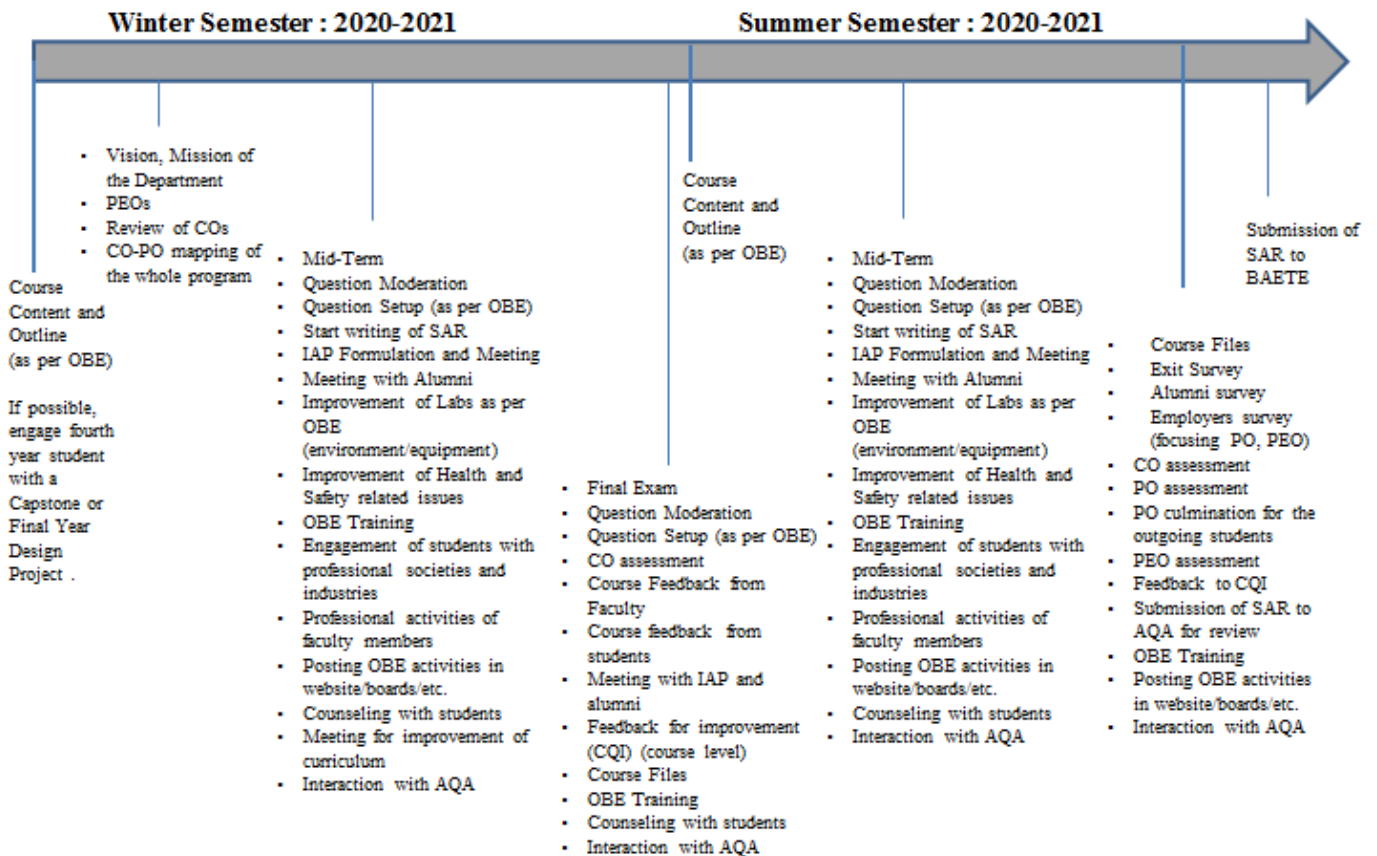


Fig. 1 Roadmap with activities related to OBE

4. Current Status of Each Department

The current status of each department is summarized in **Table 3** in terms of OBE and other important issues closely pertinent to OBE. Based on the present status of implementation of OBE in the different departments, it is found that four programs (B. Sc. in ME, B. Sc. in EEE, and B. Sc. in CE, and B. Sc. in CSE) are preparing for submission of SAR to BAETE for accreditation in 2022, i.e. after completion of the current academic year.

Table 3. Current Status Covering Accreditation, OBE, IAP, and Training Programs

<p>MPE department</p> <p>Activities Done</p> <ul style="list-style-type: none"> • Vision and mission statements of the programs, • PEOs, • CO-PO mapping, • Industrial Advisory Panel (IAP), • A capstone course added in the curriculum, • Improvement of health and safety related issues in the labs • Display of outcomes of OBE in the department <p>Activities in progress</p> <ul style="list-style-type: none"> • Assessment (CO, PO, PEO), • Preparing SAR for BAETE, • Internal meetings among the faculty members, • Communicating/meeting with AQA for review and assistance, if necessary. <p><i>The program, Bachelor of Science in Mechanical Engineering has set a target to submit SAR to BAETE for accreditation in August 2022.</i></p>
<p>EEE department</p> <p>Activities Done</p> <ul style="list-style-type: none"> • Vision and mission statements, • PEOs, • CO-PO mapping, • PEOs were prepared and mapped with POs. • Industrial Advisory Panel (IAP),

- A capstone course in curriculum,
- Display of outcomes of OBE in the department

Activities in progress

- Assessment (CO, PO, PEO),
- Preparing SAR for BAETE,
- Internal meetings among the faculty members,
- Communicating/meeting with AQA for review and assistance, if necessary.

The program, Bachelor of Science in Electrical and Electronics Engineering has set a target to submit SAR to BAETE for accreditation in August 2023.

CSE department

Activities Done

- Vision and mission statements,
- PEOs,
- CO-PO mapping,
- Industrial Advisory Panel (IAP),
- Display of outcomes of OBE in the department

Activities in progress

- Assessment (CO, PO, PEO),
- Preparing SAR for BAETE,
- Internal meetings among the faculty members,
- Communicating/meeting with AQA for review and assistance, if necessary.

Department has planned Year 2021 as a learning period of OBE; Year 2022 for formal implementation of OBE activities, and at the end of Year 2022 to submit SAR to BAETE for accreditation.

CEE department**Activities Done**

- Vision and mission statements,
- PEOs,
- CO-PO mapping,
- Industrial Advisory Panel (IAP),
- A Final-Year-Design-Project has been added in curriculum.
- Display of outcomes of OBE in the department

- Draft SAR

Activities in progress

- Assessment (CO, PO, PEO),
- Revision of SAR for submission to BAETE,

- Internal meetings among the faculty members,

- Communicating/meeting with AQA for review and assistance, if necessary.

The program, Bachelor of Science in Civil Engineering has set a target to submit SAR to BAETE for accreditation by the end of July 2022.

TVE department**Activities Done**

- Vision and mission statements,
- CO-PO mapping,
- Industrial advisory panel (IAP),

- Display of outcomes of OBE in the department

The department is looking for an appropriate organization (local/international) for accreditation. TBE department is working to find appropriate bodies for accreditation and planned to submit SAR for accreditation by 2024 to an appropriate body.

BTM department**Activities Done**

- Vision and mission statements,
- CO-PO mapping,

- Industrial advisory panel (IAP),
Planning to apply for accreditation by AACSB, a USA based accreditation by 2024.

5. Training Programs on OBE and Accreditation

As the faculty members are not familiar with outcome based education (OBE), therefore an attempt has been made to organize training program on OBE in a regular basis. The training programs conducted after reactivation of AQA for understanding of OBE and writing SAR are summarized in **Table 4**.

Table 4. Training Programs on OBE and Accreditation

Serial No.	Date	Training Subject
1	June 09, 2022	Training on OBE (for the faculty members of EEE department)
2	May 13 – May 14, 2022	Training for New Program Evaluators by IEB-BAETE
3	12 October, 2021	Workshop on OBE and Accreditation (organized for the faculty member of CSE)
4	October 7, 2021	Outcome Based Education: Complex Engineering Problems
5	October 02, 2021	Bangladesh Accreditation Council (BAC) : Accreditation
6	September 9, 2021	Writing SAR for BAETE
7	September 13, 2021	Writing SAR for BAETE - Session 2
8	September 24, 2020	Outcome Based Education
9	July 11, 2021	Quality Assurance and OBE as per the Guideline of BAETE – Session 1
10	July 11, 2021	Writing CO Using Bloom’s Taxonomy – Session 2
11	July 11, 2021	OBE – Assessment and Evaluation - Session 3
12	July 10, 2021	Foundation Training Program for Newly Appointed Faculty Members
13	July 10, 2021	Quality of Teaching: Focus on connection with learning
14	July 10, 2021	Quality of Teaching: Focus on different teaching Methods
15	April 08, 2021	Quality Assurance through OBE - Session 1

16	April 16, 2021	Implementation of Outcome Based Education
17	April 16, 2021	Writing Course Learning Outcomes
18	February 16, 2021	Quality Assurance at the Course Level

6. Activities with Timeline for Implementation of OBE and Accreditation

The activities with timeline related to implementation of OBE and accreditation are summarized in **Table 5**. The training sessions will be planned based on the needs of the departments related to the implementation of OBE and accreditation. Training sessions will also be arranged on teaching-learning, quality education, LMS, etc.

Table 5. Activities with Time for Implementation of OBE and Accreditation

Items	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22
Implementaion of OBE	Continue OBE related activities											
Formation of IAP	All programs											
Training by AQA	Training-CEE-CO/PO/PEO Assessment	Training		Training		Training		Training		Training		Training
Preparation of SAR by the departments	Self-Assessment Report (SAR)											
Internal Review of SAR (by AQA)										MPE, CEE, EEE		
Submission of SAR for Accreditation (Departments)												MPE, CEE, EEE
OBE - Infrastructure, Academic Facilities (IUT-Departments+AQA)	Continue improvement											

Note - CSE will submit SAR by December 2022 for B. SC. in CSE and B. Sc. in SE. BTM and TVE are looking for a suitable body for accreditation.

The SAC committees have prepared the detailed activities with timeline for submission of self-assessment report (SAR) to Board of Accreditation for Engineering and Technical Education (BAETE), a local body recognized by the Washington Accord in Bangladesh. The detailed schedules of different programs (tentative) are summarized in **Table 6**, **Table 7**, **Table 8**, **Table 9**, and **Table 10** for Bachelor of Science in Civil Engineering, Bachelor of Science in Mechanical Engineering, Bachelor of Science in Electrical and Electronic Engineering, Bachelor of Science in Computer Science and Engineering, and Bachelor of Science in Software Engineering programs. It can be noted that due to the lack of understanding of OBE activities, some programs need more time for preparing SAR for submission to IEB-BAETE for accreditation. The plan of the programs are summarized in Table 3. Departments will be requested to submit a revised roadmap as soon as possible.

7. Concluding Remarks

The Office of Accreditation and Quality Assurance has taken initiatives to implement OBE in different programs of IUT. The following concluding remarks can be made:

- The knowledge of the OBE related activities of the faculty members has been improved significantly and the faculty members are well motivated to implement OBE,
- Significant numbers of training sessions were conducted by the institutional experts and also experts from outside,
- For overall health and safety related issues in the campus , IUT needs an action plan and implementation of the plan accordingly,
- Fire drills by the Fire Service and Civil Defense can be planned,
- Departments need to take steps to address health and safety related issues in the labs and offices,
- Fire exits in classrooms and labs are be installed as required,
- Programs need to take steps for modification of curriculum, teaching-learning methods, etc. based on the feedback of the stakeholders,
- Two programs (B. Sc. in CE and B. Sc. in ME) are preparing SAR for submission to BAETE by August 2022,
- Two programs (B. Sc. in CSE and B. Sc. in EEE) are preparing SAR for submission to BAETE by June 2023.
- For newly recruited faculty members training sessions are to be organized accordingly.