



هيئة جودة التعليم والتدريب  
Education & Training Quality Authority  
Kingdom of Bahrain - مملكة البحرين

# **Directorate of Higher Education Reviews Programme Review Report**

**University of Technology Bahrain  
College of Administrative and Financial  
Sciences  
Bachelor of Science in Business Informatics  
Kingdom of Bahrain**

**Site Visit Date: 27 – 30 November 2022**

HA065-C3-R065

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## Acronyms

ACDC	Alumni and Career Development Centre
BQA	Education & Training Quality Authority
CAFS	College of Administrative and Financial Sciences
CILO	Course Intended Learning Outcome
CIS	Campus Information System
CQI	Continuous Quality Improvement
CRC	Curriculum Review Committee
DHR	Directorate of Higher Education Reviews
DSA	Deanship of Student Affairs
ECBE	European Council for Business Education
FDO	Faculty Development Office
HEC	Higher Education Council
HEI	Higher Education Institution
ICT	Information and Communication Technology
IILO	Institutional Intended Learning Outcome
IQA	Internal Quality Audit
IT	Information Technology
KPI	Key Performance Indicator
NQF	National Qualifications Framework
PD	Professional Development
PDC	Programme Development Committee

PEO	Programme Educational Objective
PIAP	Programme Industry Advisory Panel
QA	Quality Assurance
QAAD	Quality Assurance and Accreditation Department
QAA-UK	Quality Assurance Agency for Higher Education – United Kingdom
QMS	Quality Management System
TLA	Teaching, Learning and Assessment
UTB	University of Technology Bahrain
WBL	Work-Based Learning

## I. Introduction

In keeping with its mandate, the Education & Training Quality Authority (BQA), through the Directorate of Higher Education Reviews (DHR), carries out two types of reviews that are complementary. These are: Institutional Reviews, where the whole institution is assessed; and the Academic Programme Reviews (APRs), where the quality of teaching, learning and academic standards are assessed in academic programmes within various colleges according to specific standards and indicators as reflected in its Framework.

Following the revision of the APR Framework at the end of Cycle 1 in accordance with the BQA procedure, the revised APR Framework (Cycle 2) was endorsed as per the Council of Ministers' Resolution No.17 of 2019. Thereof, in the academic year (2019-2020), the DHR commenced its second cycle of programme reviews.

The Cycle 2 APR Review Framework is based on four main Standards and 21 Indicators, which forms the basis the APR Reports of the Higher Education Institutions (HEIs).

The **four** standards that are used to determine whether or not a programme meets international standards are as follows:

*Standard 1: The Learning Programme*

*Standard 2: Efficiency of the Programme*

*Standard 3: Academic Standards of Students and Graduates*

*Standard 4: Effectiveness of Quality Management and Assurance*

The Review Panel (hereinafter referred to as 'the Panel') decides whether each indicator, within a standard, is 'addressed', 'partially addressed' or 'not addressed'. From these judgments on the indicators, the Panel additionally determines whether each of the four standards is 'Satisfied' or 'Not Satisfied', thus leading to the Programme's overall judgment, as shown in Table 1 below.

**Table 1: Criteria for Judgements**

<b>Criteria</b>	<b>Judgement</b>
All four Standards are satisfied	Confidence
Two or three Standards are satisfied, including Standard 1	Limited Confidence
One or no Standard is satisfied	No Confidence
All cases where <b>Standard 1</b> is not satisfied	

The APR Review Report begins with providing the profile of the Programme under review, followed by a brief outline of the judgment received for each indicator, standard, and the overall judgement.

The main section of the report is an analysis of the status of the programme, at the time of its actual review, in relation to the review standards, indicators and their underlying expectations.

The report ends with a Conclusion and a list of Appreciations and Recommendations.

## II. The Programme's Profile

Institution Name*	University of Technology Bahrain
College/ Department*	College of Administrative and Financial Sciences
Programme/ Qualification Title*	Bachelor of Science in Business Informatics
Qualification Approval Number	
NQF Level	
Validity Period on NQF	
Number of Units*	61
NQF Credit	
Programme Aims*	<ol style="list-style-type: none"> <li>1. Possess expertise in systems thinking in order to develop and manage information and communications technology (ICT) solutions which enable enterprise development and business process improvement and innovation.</li> <li>2. Engage in business informatics careers and/or be a responsive member of a business organization and society with awareness of professional ethics, responsibilities, values and standards.</li> <li>3. Transfigure knowledge, understanding and academic skills through postgraduate study and/or continuing professional development.</li> </ol>
Programme Intended Learning Outcomes*	<ol style="list-style-type: none"> <li>1. Demonstrate advanced knowledge and skills in the practical and logical foundations of informatics and the business functional areas and their processes.</li> <li>2. Demonstrate critical knowledge and understanding impact of technology and information systems and skills necessary to implement and manage information systems used in business operations.</li> <li>3. Use advanced and some specialist level skills to develop, design and test information systems to enhance all facets of business, aiding in decision-making and support of business processes and applications</li> </ol>

	<ol style="list-style-type: none"> <li>4. Use a range of approaches to critically analyze and evaluate data and information in formulating solutions to business problems and issues.</li> <li>5. Utilize specialist-level skills in dealing with complex business situations and problems through IT projects, research, and in improving and innovating business processes and organizational systems.</li> <li>6. Apply a range of approaches to critically analyze and evaluate information systems, applications and business models to business environment situations and implement relevant solutions.</li> <li>7. Communicate effectively, with a range of audiences in presenting information and projects with the use of appropriate tools, techniques, and technology.</li> <li>8. Operate and function effectively an individual or groups with the need for engagement in life-long learning; and promote ethical and professional behavior in organizations and society.</li> </ol>
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\* Mandatory fields

### III. Judgment Summary

## The Programme's Judgment: Confidence

Standard/ Indicator	Title	Judgement
<b>Standard 1</b>	<b>The Learning Programme</b>	<b>Satisfied</b>
Indicator 1.1	The Academic Planning Framework	Addressed
Indicator 1.2	Graduate Attributes & Intended Learning Outcomes	Partially Addressed
Indicator 1.3	The Curriculum Content	Partially Addressed
Indicator 1.4	Teaching and Learning	Addressed
Indicator 1.5	Assessment Arrangements	Addressed
<b>Standard 2</b>	<b>Efficiency of the Programme</b>	<b>Satisfied</b>
Indicator 2.1	Admitted Students	Addressed
Indicator 2.2	Academic Staff	Partially Addressed
Indicator 2.3	Physical and Material Resources	Addressed
Indicator 2.4	Management Information Systems	Addressed
Indicator 2.5	Student Support	Partially Addressed
<b>Standard 3</b>	<b>Academic Standards of Students and Graduates</b>	<b>Satisfied</b>
Indicator 3.1	Efficiency of the Assessment	Addressed
Indicator 3.2	Academic Integrity	Partially Addressed
Indicator 3.3	Internal and External Moderation of Assessment	Addressed
Indicator 3.4	Work-based Learning	Addressed

Indicator 3.5	Capstone Project or Thesis/Dissertation Component	Addressed
Indicator 3.6	Achievements of the Graduates	Addressed
<b>Standard 4</b>	<b>Effectiveness of Quality Management and Assurance</b>	<b>Satisfied</b>
Indicator 4.1	Quality Assurance Management	Addressed
Indicator 4.2	Programme Management and Leadership	Addressed
Indicator 4.3	Annual and Periodic Review of the Programme	Addressed
Indicator 4.4	Benchmarking and Surveys	Addressed
Indicator 4.5	Relevance to Labour Market and Societal Needs	Addressed

## IV. Standards and Indicators

### Standard 1

#### The Learning Programme

*The programme demonstrates fitness for purpose in terms of mission, relevance, curriculum, pedagogy, intended learning outcomes and assessment.*

#### Indicator 1.1: The Academic Planning Framework

*There is a clear academic planning framework for the programme, reflected in clear aims which relate to the mission and strategic goals of the institution and the college.*

#### Judgment: Addressed

- The University of Technology Bahrain (UTB) has formulated a Policy on Programme Development, Review and Enhancement which outlines a clear process for developing programmes and embeds benchmarking, local regulations and professional body requirements into the development process. To ensure the programme is relevant and fit for purpose, internal and external stakeholders' consultation is required, involving students, faculty and staff members, alumni and the Programme Industry Advisory Panel (PIAP). The Policy was thoroughly and robustly applied to the most recent review of the Bachelor of Science in Business Informatics (BSBI) programme in 2021 by the Programme Development Committee (PDC) and the Curriculum Review Committee (CRC). The review involved extensive consultations with stakeholders, consideration of the National Qualifications Framework (NQF), the BQA and the Higher Education Council's (HEC) requirements, benchmarking with local, regional and international institutions, a detailed Market Scoping Report, mapping to the Quality Assurance Agency for Higher Education – United Kingdom's (QAA-UK) Subject Benchmark Statements and the Association for Computing Machinery - Association for Information Systems' (ACM-AIS) Curriculum Guidelines, and reviews by external examiners.
- The title of the programme is concise and indicates the type of qualification (Bachelor of Science) and discipline (Business Informatics). It is consistent with national and international expectations based on the results of the 2021 programme review and external examiners' feedback and is accurately documented on certificates, in the Programme Specification, the University Catalogue, and on the UTB website. The programme was also mapped to NQF Level 8 during the review, although it has not yet been submitted for the NQF placement process. The PDC, as the Mapping Committee, generated mapping

scorecards to ensure alignment with NQF strands. The CRC took on the role of the Confirmation Panel to verify compliance with NQF requirements.

- The BSBI has three Programme Educational Objectives (PEOs), which are programme aims. They were revised during the programme review following extensive consultation. The PEOs are clearly expressed and mapped to the College and UTB missions demonstrating how they contribute to the achievement of the university's strategic intents. The achievement of PEOs is also evaluated.
- UTB has an institutional Risk Management Policy which outlines the framework, processes and structures for managing risks. The Risk Management Team, headed by a Risk Manager, has oversight of risk management and is responsible for producing a Risk Management Plan and this was confirmed during the interviews. A Risk Register is maintained with 11 risks from the university's 'risk universe' and Risk Action Plans have been developed for monitoring purposes. However, none of the risks are related to the BSBI programme and interviews showed that there was limited awareness of the types of risks that can affect the future viability of the programme, including the declining student enrolments and lower self-evaluation of the Programme Intended Learning Outcomes' (PILOs) achievement by students. Therefore, the Panel recommends that the College should define strategic programme-level risks related to the BSBI programme and include these in the Risk Register.

## **Indicator 1.2: Graduate Attributes & Intended Learning Outcomes**

*Graduate attributes are clearly stated in terms of intended learning outcomes for the programme and for each course and these are appropriate for the level of the degree and meet the NQF requirements.*

### **Judgment: *Partially Addressed***

- UTB has defined five Institutional Intended Learning Outcomes (IILOs) *in lieu* of graduate attributes which describe the knowledge, skills and competencies a student should have upon graduation. The IILOs are generic and reflect a broad range of abilities, including specialised knowledge, undertaking research to develop solutions, communication and an ability to collaborate. One of the weaknesses UTB has self-identified in its programmes is a lack of focus on emerging technologies. This is also evident in the IILOs which do not have any reference to using technology, despite the name of the institution being the 'University of Technology'. Therefore, the Panel recommends that the College should revise the IILOs to ensure there is an appropriate emphasis on technology and technical skills of graduates in line with its name and mission. The IILO Policy describes how IILOs are embedded into programmes through alignment with the PEOs and PILOs, and evidence of this for the BSBI programme was provided.

- The BSBI programme has eight PILOs which are mapped to the PEOs and stated using appropriate action verbs. They were benchmarked during the recent programme review to be in line with NQF Level 8 requirements, and incorporate ACM-AIS curriculum guidelines and QAA-UK's Subject Benchmark Statements. There is some overlap between PILOs 4 and 6 since both refer to using approaches to evaluate data and information systems to formulate business solutions, while PILO 6 refers to 'business environment situations' which can only be simulated in undergraduate study. Also, PILO 8 is 'triple-barreled' because it refers to teamwork skills, engagement in life-long learning and promoting professional ethics. This is problematic when measuring and linking courses and Course Intended Learning Outcomes (CILOs) to the PILOs because it gives the impression that a course leads to the attainment of all three skills but could only be relevant to one. Therefore, the Panel recommends that the College should review and revise the BSBI PILOs to ensure that they are clear, related to distinct skills and competencies, and measurable.
- CILOs have been defined for every BSBI course and listed in the Course Specification. Each course has between four and six CILOs which have been mapped to the PILOs. A curriculum mapping, referred to as the 'Skills Map', is included in the Programme Specification and shows which courses contribute to specific PILOs; and a mapping matrix of the revised CILOs and PILOs has been produced. The Panel examined samples of the mapping of CILOs to NQF sub-strands and noted that CILO C2 in 'Financial Management' (BSBI733) and CILOs C6 and C7 in 'Operations Management' (BSBI821) are not linked to the 'Practical application' sub-strand despite being related. The Panel advises UTB to review the mapping of CILOs to NQF sub-strands. Course-level external examiner reports confirm the appropriateness of CILOs.

### **Indicator 1.3: The Curriculum Content**

*The curriculum is organised to provide academic progression of learning complexity guided by the NQF levels and credits, and it illustrates a balance between knowledge and skills, as well as theory and practice, and meets the norms and standards of the particular academic discipline.*

#### **Judgment: Partially Addressed**

- The BSBI programme consists of 180 credits delivered over 10 trimesters, with students taking an average load of six courses (or 18 credits) per trimester. The study plan is designed to allow students to progress year-by-year in terms of NQF levels and credits. The sequence of courses is depicted in a Curriculum Flowchart, however there are discrepancies between the pre-requisites in the flowchart, the study plan in the Programme Specification and the Course Specifications. For example, the pre-requisites for Financial Management (BSBI733), Business Planning (BSBI832), Islamic Banking and Finance 1 (BUSI811) and FinTech (COMP825) are inconsistent between different

documents. The Panel recommends that the College should review and update the pre-requisite courses in all programme documents, including the Curriculum Flowchart, study plan and Course Specifications for accuracy and ensure they are correctly stated.

- The BSBI curriculum is organised into seven clusters, including Information Technology (IT) and six functional areas of business. There is an equal balance between IT and business courses, which is appropriate for a business informatics degree, however, they are organised into separate clusters. The number of courses in which students have an opportunity to integrate business and IT knowledge to develop the 'capability of providing IT solutions to meet specific business needs' is limited to the Capstone Project. Therefore, Panel recommends that the BSBI courses should be reviewed and updated to include additional topics and learning materials which integrate business and IT concepts in line with the PILOs.
- To achieve an appropriate balance between theory and practice, most of the IT courses have a laboratory component allowing students to apply what they have learnt by using a range of industry-standard software applications. Students are also taken on field visits and attend talks provided by guest speakers from the industry. The six-credit internship enables students to acquire skills in a real-life setting. An examination of the Course Specifications by the Panel and feedback gleaned from interviews confirmed that course contents cover all of the expected elements in terms of depth and breadth. The BSBI curriculum has been regularly updated in line with the Course Implementation and Review Policy, and based on benchmarking, professional body requirements, feedback from external examiners and various stakeholders.
- Although efforts were made to ensure that all of the learning materials in the courses, including textbooks and references, were current and appropriate during the latest programme review, the Panel noted that some courses rely on textbooks which are more than ten years old, as well as outdated references. It is, therefore, recommended that the College should update the learning materials listed in Course Specifications to ensure they are current and appropriate.

### **Indicator 1.4: Teaching and Learning**

*The principles and methods used for teaching in the programme support the attainment of programme aims and intended learning outcomes.*

#### **Judgment: Addressed**

- UTB has formulated the Teaching, Learning and Assessment (TLA) Policy which refers to the use of diverse teaching methods, including constructive, inquiry-based, collaborative and experiential learning methods. These methods are intended to be aligned with the

university's teaching philosophy which promotes student-centred lifelong learning, reflects current pedagogical practices in the field, and is informed by research and professional standards. All Course Specifications list the teaching and learning methods to be applied in a course, and examples noted by the Panel include interactive lectures, problem-based learning, group activities, case study analysis, Kahoot learning games, presentations, videos, role playing, simulations and reflections, all of which aim to actively engage students in learning. Faculty also integrate research into teaching practices. An examination of the sample course portfolios provided and feedback from interviews confirmed that a variety of teaching methods were deployed and were deemed to be effective by students, as evidenced by the Course Evaluation and Student Satisfaction surveys.

- UTB has a comprehensive E-learning Policy and uses Moodle as its Learning Management System to support e-learning. The Panel had a chance to look at Moodle and learn about its utilisation during the demo session. Other online tools, such as Kahoot and Nearpod are also used to support teaching and formative in-class assessments. The Panel was provided with examples of how Moodle and these additional tools facilitate the attainment of CILOs, which were also noted in Course Specifications.
- Student participation in learning is defined through the notional hours allocated to directed and independent learning according to the TLA Policy. In the first year, students spend more hours in directed learning, and the balance shifts towards independent learning every year after so that in the final year students are doing mostly independent learning through the Capstone Project and internship. To encourage lifelong learning and introduce professional practices, UTB provides informal and non-formal learning opportunities to students through field visits, guest speakers and participation in national competitions and research conferences. However, during the interviews, the Panel found that these activities are *ad hoc* and inconsistent across courses, and, therefore, recommends that a more systematic and integrated approach to facilitating exposure to professional practice should be adopted, ensuring students consistently benefit from applied learning.
- BSBI students have limited opportunities to engage in research due to the nature of the programme which is oriented towards IT development. The Capstone Project involves students carrying out secondary research using a literature review to develop a software application or information system. This was evident to the Panel in the sample projects provided and is consistent with programmes of this type internationally.

### **Indicator 1.5: Assessment Arrangements**

*Suitable assessment arrangements, which include policies and procedures for assessing students' achievements, are in place and are known to all relevant stakeholders.*

### **Judgment: Addressed**

- UTB's assessment framework is detailed in the TLA Policy which contains provisions for assessment design and approval, marking, moderation, providing feedback and dealing with misconduct. The Policy is consistent with HEC regulations and has been disseminated to students in the Student Handbook, during their induction, and in Course Specifications. Faculty members are made aware of assessment procedures and arrangements during their college orientation and in the Faculty Manual. All of the manuals and handbooks are available on UTB's website, ensuring ease of access. The Panel found during the interviews that these dissemination efforts have resulted in staff and students having a sound knowledge of assessment processes.
- Both formative and summative assessments are used to evaluate progress and assess student learning respectively, which is evident in Course Specifications and samples of assessments provided. The number of assessments in each course was reduced during the 2021 programme review in response to feedback from external examiners, which was confirmed during the interviews. The typical assessment schedule consists of a mid-term examination, coursework component (typically a project) and a final examination. A Table of Specifications is generated for each summative assessment showing how it contributes to the achievement of CILOs. External examiners have commented on the need for better alignment between assessments and CILOs in some courses and UTB has addressed this recommendation through improvement plans.
- Marking rubrics are formulated to ensure transparency, fairness and rigour in the assessment process. Samples of marked assessments with faculty feedback were provided and interviews with students confirmed that they receive prompt feedback on their progress and learning. Internships are assessed using relevant forms and templates to assess learning *in situ*, while the Capstone Project is assessed by a panel and double-marking. To further assure rigour in the assessment process, the Moderation of Assessment Policy details pre and post moderation arrangements which involve internal moderators and External Examiners. Samples of moderation reports were made available to the Panel.
- Provisions for student appeals are detailed in the Grade Appeal Policy and a Grade Appeal form is available. Following a successful appeal, the Grade Erratum procedure is followed to assure the integrity of student records. There are provisions in place to address academic misconduct in the Student Grievance, and Academic and Behavioral Misconduct Policy and the Scientific Research Policy. The latter also covers ethics in relation to research undertaken by students in assessment and the Capstone Project.

## Standard 2

### Efficiency of the Programme

*The programme is efficient in terms of the admitted students, the use of available resources - staffing, infrastructure and student support.*

#### Indicator 2.1: Admitted Students

*There are clear admission requirements, which are appropriate for the level and type of the programme, ensuring equal opportunities for both genders, and the profile of admitted students matches the programme aims and available resources.*

#### Judgment: Addressed

- UTB has a clear published Admission Policy which has been revised five times, the latest being in September 2021. Admission of students with special needs is detailed separately in the Special Needs Policy. The Admission Policy is comprehensive and covers all aspects of admission to the BSBI programme, including entry requirements, application processing and transfer admissions. Specific entry criteria have been defined for students with non-Bahraini qualifications in a qualification matrix. Separate policies for external and internal transfers and Recognition of Prior Learning are available.
- The Panel learnt from the interviews and the evidence provided that the Admissions Office is responsible for the consistent implementation of the Admission Policy, together with the College Deans. This is achieved through a standardised admissions process using forms and checklists to verify that requirements are met. The University admits applicants who meet the admission criteria without discrimination or prejudice, and this is reflected in the profile of students admitted and studying in the BSBI programme. Approximately 39% of all new admissions and 36% of all students in the programme are female and 8% are non-Bahraini. The Admission Policy is widely disseminated on the UTB website, in the Catalogue and in marketing brochures.
- To ensure admission standards are consistent with local and international expectations, they have been benchmarked with those of four other HEIs and the European Council for Business Education (ECBE) standards. Feedback on entry requirements was also obtained from the PIAP and External Examiners during the programme review and they were found to be clear and appropriate for the programme level and specialisation. UTB uses the internationally recognised Oxford Online Placement Test to assess the English proficiency of students, while applicants with a TOEFL score of 500 or IELTS 5.5 are

exempt from the placement test, which is in line with current practices in undergraduate education across the region.

- Appropriate remedial courses in English (ENGL301 and ENGL302) and Math (MATH300) to support inadequately prepared students have been deployed and are offered through the Centre for General Education. The effectiveness of the remedial courses is evaluated annually by examining the students' final marks in the undergraduate courses and a comprehensive report is published. The Panel appreciates the systematic follow up and monitoring of the remedial programme's effectiveness based on student performance in the BSBI programme.
- Provisions for reviewing the Admission Policy are stipulated in the Policy itself and implemented by the Institutional Research Office which undertakes an annual study of the effectiveness of the Policy using student performance data. The review has identified the opportunities for improvement which have been discussed during the programme review and actioned. As mentioned above, external feedback from the PIAP and benchmarking during programme reviews are also used to verify the effectiveness of the Admission Policy.

## **Indicator 2.2: Academic Staff**

*There are clear procedures for the recruitment, induction, appraisal, promotion, and professional development of academic staff, which ensure that staff members are fit-for-purpose and that help in staff retention.*

### **Judgment: *Partially Addressed***

- UTB has a suite of policies and procedures for the recruitment, induction, appraisal, professional development and promotion of academic staff which are clear and comprehensive. They are disseminated to faculty during their initial orientation and available in the Faculty Manual. The faculty recruitment process involves a teaching demonstration and panel interviews, which was confirmed during the interviews. Samples of recruitment forms were provided to the Panel. There are 23 College of Administrative and Financial Sciences (CAFS) faculty members involved in the delivery of the BSBI, of which 15 or (65%) are full-time and of which 13 (or 56%) have a PhD. The Panel examined the faculty CVs and concluded that the academic staff have an appropriate range of qualifications and experience to teach on the BSBI programme, which is also reflected in the course-faculty matrix. However, the CAFS has never had a full Professor and 94% of the staff are at Assistant Professor or Lecturer rank. Since UTB has research aspirations which are articulated in its vision and mission, the Panel recommends that UTB should review the CAFS faculty profile and ensure that there are sufficient

academic staff at senior ranks to support the programme's delivery and its research aspirations as a university.

- In line with the Policy on Faculty Induction, Peer Review and Mentoring Program, UTB conducts a two-level faculty induction for part-time and full-time faculty, starting with an institutional orientation by the Human Resources Department and followed by a college-level orientation by the Dean. The Library, Research Committee, CRC and College Continuous Quality Improvement (CQI) Committee are also involved, and new faculty members are assigned mentors. Focus groups with new faculty are organised at the end of their first trimester to obtain feedback about their orientation experience, *in lieu* of a survey. The special needs of women are taken into consideration with regards to leave and other responsibilities in line with international practices and local regulations.
- Academic staff workloads are governed by the Faculty Loading Policy, with all faculty allocated nine hours of research time and six hours of student advising time every week. The remaining 25 hours are split between teaching and engagement in committee work depending on the academic rank. Assistant professors are expected to do 15 hours of teaching, although the Panel noted that this is sometimes exceeded and it was noted during the interviews that faculty with laboratory classes can have up to 19 hours of teaching per week. In addition, the Panel learnt from the interviews and the evidence provided that most faculty have more than 40 advisees with whom they are required to meet twice or thrice per trimester. Faculty are also expected to conduct remedial tutorials with delinquent students during advising hours. Only 10 engagement hours per week are allocated for committee meetings, teaching preparation, marking, professional development, community engagement, Quality Assurance (QA) and other scholarly activities. With a decline in the number of CAFS faculty from 54 in 2018-2019 to only 35 in 2021-2022, there are fewer staff available to take on the range of roles and responsibilities. Therefore, the Panel recommends that UTB should review the academic staff workloads to ensure they are appropriate and reflect the full scope of activities that faculty engage in.
- Faculty appraisals are implemented using the Performance Appraisal System for Teachers which is a quantitative assessment of performance based on scores from different evaluations. Qualitative feedback on performance is documented in the form of a brief summary by the Programme Head following an appraisal meeting with the faculty member, which was confirmed in interviews. The outcomes of the appraisal are used to inform Professional Development (PD) needs which are also identified through the Training Needs Analyses by the Faculty Development Office (FDO). The needs are documented in Individual Faculty Development Plans and College Faculty Development Plans. In 2021-2022, the FDO organised 38 different internal and external PD sessions for faculty covering pedagogical and research topics and including training sessions by Advance-HE (UK). Nine CAFS faculty members have Advance-HE fellowships. Supervision capacity is also developed through training and PD and monitored in student

satisfaction surveys. At the College level, CAFS has organised 23 PD sessions in 2021-2022 and the Quality Assurance and Accreditation Director hosts several workshops annually on quality matters. Overall, the Panel found that there are sufficient opportunities for faculty to develop their skills which are appropriately monitored for effectiveness and impact by the FDO.

- The Scientific Research Policy outlines procedures related to research and there is evidence of alignment between faculty research and the research thrusts of the College and University. A range of incentives, funds and other types of research support are available to faculty undertaking research, although expectations in terms of outputs are not defined, except those related to promotion. The list of research publications and presentations by CAFS faculty for the period 2018-2019 to 2021-2022 shows a relatively low output compared to the number of faculty, which may be attributable to workloads. The promotion procedure was reviewed and revised in 2022 based on feedback from the Faculty Satisfaction Survey and the lack of promotions within CAFS for the past five years as was explained during the interviews.
- Faculty retention and turnover are monitored and reported in the CAFS Retention Report which shows low turnover rates, except during the global pandemic in 2020/2021 when almost 30% of faculty left. In 2021-2022 the retention rate was 100%. Measures to improve retention include better compensation and benefits based on recent benchmarking with four local HEIs, which, as was confirmed during interviews, are being actioned by the Human Resources Department.

### **Indicator 2.3: Physical and Material Resources**

*Physical and material resources are adequate in number, space, style and equipment; these include classrooms, teaching halls, laboratories and other study spaces; Information Technology facilities, library and learning resources.*

#### **Judgment: Addressed**

- There are 22 classrooms and seven laboratories dedicated to CAFS courses, which are appropriately equipped, and an auditorium which accommodates 240. All classrooms have smartboards and Wi-Fi is available. Other facilities are being re-developed following the change in UTB ownership. The Panel observed during the campus tour that a basketball court and a new cafeteria are under construction. Students have access to recreational games, a café, small park and the student lounge. A Campus Improvement Master Plan has been developed to modernise the campus and improve the facilities with renovations under way at the time of the site visit.

- The Information and Communication Technology (ICT) Department manages IT facilities by following the IT policies, and provides specialised software which is used by BSBI students. The Panel notes that Adobe Flash, which is used to teach multimedia in 'Multimedia Development' (COMP534) is outdated and is no longer supported by Web browsers; consequently, the Panel suggests adopting a newer application like Adobe Animate. In addition, course materials are uploaded on Moodle, while the MyUTB portal is used by students to access their record.
- The library has electronic and print resources for the BSBI programme, and has mapped textbooks, references and e-books to specific courses. Electronic resources are available in the Digital Library which provides access to several online databases and journals, including EBSCO, IEEE, Scopus and ScienceDirect.
- Facilities are maintained by external contractors in line with the Physical Facilities Management Policy and overseen by the Facilities and Maintenance Department based on a specific schedule designed for preventive, corrective and statutory maintenance. The Health and Safety Policy details the arrangements for health and safety, although it has not been updated since 2016 (see Recommendation in Indicator 4.1). The Panel notes that first aid kits were not available across campus and recommends that first aid kits should be provided at different locations to ensure that immediate medical attention can be given when required. Students have access to an on-campus clinic which provides first-aid. The clinic and the Risk Management Team organise health and safety training, while the Health and Safety Officer co-ordinates statutory fire drills to ensure UTB remains in compliance with national regulations and legislation.
- The adequacy and effectiveness of the physical and material resources are evaluated using several mechanisms and considered by the Instructional Materials and Library Committee. Operational plans have Key Performance Indicators (KPIs) which are reported on in Annual Accomplishment Reports. The annual Student Satisfaction Survey contains questions about the library and IT provision and data is analysed at the programme level which allows UTB to address specific concerns by BSBI students. The survey results for the last three years show high levels of satisfaction with both areas. Surveys focusing on IT and library services have also been conducted and the Panel learnt from the interviews that improvements had been made to the hardware and software in the laboratories. It was also explained during the interviews that additional library resources, including VitalSource, had also been acquired based on the student feedback and benchmarking.

## **Indicator 2.4: Management Information Systems**

*There are functioning management information and tracking systems that support the decision-making processes and evaluate the utilisation of laboratories, e-learning and e-resources, along with policies and procedures that ensure security of learners' records and accuracy of results.*

**Judgment: Addressed**

- The Campus Information System (CIS) is used to manage student records. The CIS has student (MyUTB) and staff interfaces, and allows for reports related to student schedules, enrolments and grades to be generated. The Panel was given a demonstration of the CIS during the virtual site visit and found it to have limited functionality with many key tasks, such as producing lists of student advisees or delinquent students, still being performed manually. The CIS is also not integrated with the other institutional systems, such as the Student Financial System which is used to process financial transactions. The Human Resource Management System is used to manage staff records. A new cloud-based information system, EMADA, has been developed to replace these legacy systems. The Panel learnt during interviews that this system will be deployed in 2023 following testing. The Panel recommends that UTB should prioritise the implementation of the new student information system EMADA to facilitate improved decision-making and automate key processes such as academic advising and monitoring at-risk students. E-learning is supported through Moodle and an executive dashboard is in place to monitor KPIs.
- UTB monitors the utilisation of its IT resources, including computer laboratories, Moodle and e-resources. Utilisation reports are considered by the Instructional Materials and Library Committee to ensure that resources are adequate and available, and to make decisions about the acquisition of additional resources.
- The Securing Students' Records Policy has been formulated to assure security of student records and accuracy of results, along with the Record Retention Policy. Appropriate procedures are followed for storing, accessing and backing-up student data, with the Admission and Registration Offices having primary oversight of these, as was explained during interviews, together with the ICT Department which implements a number of policies related to data and systems security. The Panel was informed during the interviews and the campus tour that physical records are stored in a secure location in the records room, and electronic versions are maintained on the CIS with access restricted by passwords and specified access privileges.
- Appropriate policies and processes are in place to store assessment results which are released to students after being approved by the College Council. Any changes to grades must be processed and approved in line with the Grade Erratum Procedure and an Audit Trail is used to verify the changes. The Panel was provided with samples of awarded certificates and transcripts which accurately reflect students' learning and are issued following a rigorous verification process within the specified timeframe, which was confirmed during interviews.

## Indicator 2.5: Student Support

*There is appropriate student support available in terms of guidance, and care for students including students with special needs, newly admitted and transferred students, and students at risk of academic failure.*

### **Judgment: Partially Addressed**

- The Deanship of Student Affairs (DSA) has oversight of academic support services at the University, which are underpinned by the Student Academic Support Services Policy. The Alumni and Career Development Centre (ACDC), within the DSA, is responsible for providing career support services to students and organises a variety of career fairs, workshops and events. The Panel notes, however, that the Head of the ACDC is not a full-time position and is filled by an academic staff member with a 12-credit teaching load. The Panel advises UTB to appoint a full-time ACDC Head whose role is dedicated to the provision of career support services. The library runs workshops that introduce students to library resources. Similarly, the ICT Department delivers sessions on Moodle and supports faculty with specialised software used on the BSBI programme laboratories, such as SAP. The effectiveness of all of these student support services is assessed through satisfaction surveys.
- The Office of Student Services organises an induction for all new students every trimester which includes information about the University, academic policies, the Colleges, the library, IT facilities and support services. Transfer students are given an individual orientation at the College level to ensure that they are familiar with UTB regulations and policies. The BSBI programme also includes two non-credit bearing Euthenics courses which focus on the transition to university life. However, the appropriateness of these induction and orientation activities is not assessed and the Panel recommends that UTB should develop and implement relevant mechanisms to evaluate the effectiveness of the student induction arrangements.
- Once they are enrolled at the University, all students are assigned to an academic advisor whom they must meet two or three times per trimester for guidance and advice. Most faculty on the BSBI programme are assigned more than 36 advisees, which was confirmed during the interviews. Records of advising sessions are maintained manually. Delinquent students are identified based on criteria specified in the Student Academic Support Services Policy. They are tracked regularly, given a reduced credit load, and provided with academic support through tutorials, and counselling where required. The effectiveness of these intervention strategies is monitored.
- UTB organises social events for students and has student clubs. Sports days are organised annually, as well as charity events and outreach activities with local organisations. However, these activities are *ad hoc*, while extra-curricular facilities are limited and

currently being developed. Students have expressed interest in having more events and clubs and the Panel recommends that UTB should develop planned opportunities for students to engage in extra-curricular activities which are evaluated for effectiveness. Females make up approximately 36% of the student population and their needs are appropriately catered to by having female representatives on the Student Council and dedicated facilities such as a student lounge for women only.

## Standard 3

### Academic Standards of Students and Graduates

*The students and graduates of the programme meet academic standards that are compatible with equivalent programmes in Bahrain, regionally and internationally.*

#### Indicator 3.1: Efficiency of the Assessment

*The assessment is effective and aligned with learning outcomes, to ensure attainment of the graduate attributes and academic standards of the programme.*

#### Judgment: Addressed

- The validity and reliability of assessment methods is stipulated in the TLA Policy which details assessment principles, and how assessments are to be designed, verified through moderation processes and approved. Both formative and summative assessments are used in the BSBI courses with the former being used to evaluate progress through exercises, quizzes and assignments, and the latter used to assess the achievement of the CILOs. Courses which include a laboratory component include a lab-based assessment. Course specifications contain a mapping of all assessments to specific CILOs and this is extended further in the Table of Specifications which specifies alignment with individual examination questions or coursework components. A CILO Assessment Plan is developed for each course showing the CILOs and related assessments and performance criteria. Internal and external moderation processes (see Indicator 3.3) are used to verify that an assessment has been set at the appropriate level and meets the academic standards of the programme. Course co-ordinators' meetings are also held to discuss the design of final examinations. The Panel was provided with marked samples of a range of formative and summative assessments, which are also maintained in course portfolios and confirmed the consistent implementation of assessment procedures.
- At the end of each course, a CILO Evaluation Report is prepared and considered in the Course Review Report in which instructors comment on the assessment methods and the achievement of the CILOs. Recommendations for improvements are made and the Panel learnt during the interviews that these are implemented in the next iteration of the course. To ensure achievement of PILOs, a separate PILO Evaluation Report is produced for every course, which indicates how students performed in relation to the PILOs mapped to that course. According to the Intended Learning Outcomes Policy, the expected average level of attainment of each PILO is 3.00 and this is reported in the PILO Evaluation Reports. A summarised CILO-PILO Achievement Matrix is also generated. Achievement of PILOs is also evaluated by graduating students in the Senior Exit Survey and through the

practicum and Capstone Project. The BSBI Annual Programme Report contains a summary of the overall PILO achievement on the programme for a particular academic year.

- The Course Implementation and Review Policy includes provisions for monitoring the effectiveness of assessment processes and the primary responsibility for this lies with the Course Co-ordinator. Minor changes to assessments are made in response to recommendations from Course Review Reports, while major changes are made during periodic reviews of the programme which take into consideration feedback from a range of internal and external stakeholders. The number of assessments in the BSBI courses was reduced during the most recent review in response to this feedback, and more practical assessments were introduced in the form of an in-course project and this was confirmed during the interviews.

### **Indicator 3.2: Academic Integrity**

*Academic integrity is ensured through the consistent implementation of relevant policies and procedures that deter plagiarism and other forms of academic misconduct (e.g. cheating, forging of results, and commissioning others to do the work).*

#### **Judgment: *Partially Addressed***

- UTB has a Policy on Student Grievance, and Academic and Behavioral Misconduct which details procedures related to academic integrity. The TLA Policy also covers different forms of academic misconduct. Information about academic integrity is shared with students in the Student Handbook, during induction and in Course Specifications. Students are taught about academic integrity in the Euthenics courses. There are also procedures related to research ethics in the UTB Scientific Research Policy which are communicated to faculty in the Research Handbook and the Faculty Manual along with information about plagiarism.
- To detect plagiarism, UTB adopted Turnitin in November 2021 and set a threshold of 20% as the maximum similarity index for all coursework submissions. Samples of Turnitin reports were provided with the SER, none of which exceeded the threshold. There was also evidence of the use of Turnitin in course portfolios and samples of the Capstone Projects, although the Panel noted isolated cases where a Turnitin report was not available. During the interviews, the Panel was informed that academic misconduct detection in IT programming courses is reliant on faculty manually identifying copied assessments, even though automated code plagiarism checkers are available. The Panel, therefore, recommends that UTB should implement appropriate software tools for detecting plagiarism in courses which involve programming and coding.

- The penalties for plagiarism are defined in the relevant policies and consistent with HEC regulations. However, when the Panel requested samples of plagiarism cases to verify how the penalties were implemented, the response received from UTB was that no violations had been reported since students were provided with access to Turnitin and could re-submit their work three times to ensure it was under the prescribed threshold. The Panel does not consider this approach to be pedagogically sound because it does not promote awareness of what constitutes plagiarism and only focuses students on an arbitrary threshold that represents a similarity percentage. Submissions which are below the 20% threshold may still contain plagiarised text copied from unacknowledged sources. Therefore, the Panel strongly recommends that UTB should review the effectiveness of the processes for deterring, detecting and penalising plagiarism and develop a holistic approach to fostering a culture of academic integrity.
- The arrangements in place for detecting cheating in examinations are robust and consistently implemented with a small number of cases reported annually and dealt with by the Student Disciplinary Tribunal.

### **Indicator 3.3: Internal and External Moderation of Assessment**

*There are mechanisms in place to measure the effectiveness of the programme's internal and external moderation systems for setting assessment instruments and grading students' achievements.*

#### **Judgment: Addressed**

- Internal and external moderation processes are described in the Moderation of Assessment Policy and the Programme and Course External Examination Policy, and applied at the BSBI course and programme levels to ensure assessments are fit-for-purpose and aligned to CILOs. Both pre and post assessment moderation is undertaken internally and overseen by the Specialisation Co-ordinator, with an internal moderator and double-marker appointed for each course. Objective assessments, such as multiple-choice tests, are not moderated but checked for technical accuracy. All Capstone Projects are double-marked. Samples of internal pre and post assessment moderation reports were provided and the Panel confirmed that internal moderation was undertaken consistently in line with the relevant policies and using standard templates. Moderation reports were also maintained in course portfolios. Improvements and revisions made in response to recommendations by internal moderators are recorded on the moderation forms, verified by the Specialisation Co-ordinator and approved by the Programme Head and the Dean.
- External moderation is also undertaken pre and post assessment in accordance with the Policy. External examiners are appointed for each cluster of specialised courses within the BSBI curriculum for a period of two years based on a recommendation by the Programme Head and the examiners' expertise and background. Guidelines are provided to the

Examiners. Feedback received through pre-assessment external moderation is summarised and followed up on to ensure revisions are made in line with recommendations. Post-assessment moderation takes the form of external examination with course and programme-level examiners verifying students' work and standards of assessment in individual courses every trimester and overall on the BSBI programme annually. The Panel found from interviews and from the evidence provided that Improvement Plans are prepared based on the feedback from the external examiners, and followed up on by the College CQI Committee, the College Council and the Quality Assurance and Accreditation Department (QAAD).

- The effectiveness of the internal and external moderation arrangements is evaluated through Internal Quality Audits (IQAs) by the College CQI Committee. Improvement Plans are developed to address areas which require attention and followed up on to ensure appropriate actions are taken. The performance of external examiners is also assessed.

### **Indicator 3.4: Work-based Learning**

*Where assessed work-based learning takes place, there is a policy and procedures to manage the process and its assessment, to assure that the learning experience is appropriate in terms of content and level for meeting the intended learning outcomes.*

#### **Judgment: Addressed**

- UTB has an institutional Work-Based Learning (WBL) Policy and a related WBL Manual which ensure an equivalent internship experience for all students on the BSBI programme. The WBL Manual provides clear and comprehensive guidance to students, academic staff and industry practicum supervisors in managing the practicum experience which takes the form of a six-credit course (BSBI842) involving 240 hours of practical training in a students' final trimester of study. Students have the opportunity to apply the knowledge and skills learnt on the BSBI programme in a real workplace environment, offered by a number of WBL partners from diverse industries. The CILOs of the practicum course are mapped to all of the BSBI PILOs, thus ensuring that the internship contributes effectively towards the achievement of the overall PILOs. The evaluation of the student by the industry supervisor is also a component used in programme assessment which is reported in the annual PILO Evaluation Reports.
- The assessment schedule for the internship consists of a Practicum Accomplishment Report (30%) prepared by the student, and two evaluations by the industry supervisor related to performance (50%) and competencies (20%). Accomplishment Reports must be submitted using Turnitin. The Panel was provided with samples of marked Accomplishment Reports which confirmed that the assessment procedures are well-managed, consistently implemented, and appropriate in terms of content and level. To

ensure that industry supervisors are able to assess students' performance in terms of learning outcomes, they are briefed by the academic supervisor who also maintains frequent contact with the student while they are on site as explained in the interviews. The Panel was satisfied with the assessments provided by the industry supervisors; however, at the same time it was noted that improving the orientation provided to industry supervisors and closer monitoring of students were highlighted as opportunities for improvement in relation to WBL. Considering the weight of the grade given by the industry supervisor (70%), the Panel agrees with this recommendation and also suggests that UTB considers reducing that weight.

- To monitor the effectiveness of the internship, both the WBL providers (employers) and students are surveyed and the results are reported and discussed at the College Council. Recommendations for improvement are suggested and followed up on by the College CQI Committee and QAAD. Students interviewed by the Panel expressed overall satisfaction with the internship arrangements and suggested that the practicum duration be extended since it brings valuable experience and can lead to job opportunities.

### **Indicator 3.5: Capstone Project or Thesis/Dissertation Component**

*Where there is a capstone project or thesis/dissertation component, there are clear policies and procedures for supervision and evaluation which state the responsibilities and duties of both the supervisor and students, and there is a mechanism to monitor the related implementations and improvements.*

#### **Judgment: Addressed**

- BSBI students are required to complete a Capstone Project that involves developing a software or prototype to solve a business problem, which is consistent with Business Informatics programmes internationally. The Project is taken over the final two trimesters of study in 'Capstone Project A' (BSBI833) and 'Capstone Project B' (BSBI843). To commence the Capstone Project a student must have completed all of the IT courses on the programme and achieved 'graduating status'. This pre-requisite is not shown in the BSBI833 course specification. Students must also complete the 'Research Methods' (BSBI731) course, but this course has not been included as a pre-requisite (see recommendation 1 under Indicator 1.3). The CILOs of the Capstone Project courses are mapped to all of the PILOs and the students' evaluation of their project experience contributes towards the evaluation of the PILO achievement on the programme. Students generally rate the project favourably in relation to its support for the PILOs, although more business-related topics are recommended for inclusion (see recommendation 2 under Indicator 1.3). The Project is also directly relevant to IILO 2.

- The arrangements and roles and responsibilities of supervisors and students are stated in the Capstone/Thesis Writing Policy, which also includes a separate marking rubric for the BSBI Project due to its unique requirements. Working in teams of three, students are expected to develop a software prototype and write a 10,000 to 15,000-word report detailing the development process. Each group has two supervisors, from CAFS and the College of Computer Studies. Supervisors are trained through in-house and external workshops organised annually. The Panel was informed during the interviews that students can choose their own topic but are also provided with suggestions of contemporary topics, and supervisors are allocated based on the selected topic. Progress is monitored through regular meetings and the submission of milestones.
- All Capstone Projects are assessed by a panel of one external and two internal assessors using pre-defined score sheets and must be submitted through Turnitin. Unlike other assessments where a 50% sample is double-marked, all Capstone Projects are double-marked. Samples of student projects were provided, along with score sheets, which confirmed that student work is at an appropriate level and robustly assessed.
- Course Review Reports and CILO Evaluation Reports are prepared to monitor every iteration of the courses. Student satisfaction with the supervision and resources available to undertake the Capstone Project is monitored using the Thesis/Capstone Satisfaction Survey, and the recommendations for improvements are made based on the results. It was explained in the interviews that these are followed up on by the College CQI Committee and QAAD. During the interviews, students expressed high levels of satisfaction with their supervisors and the Panel appreciates the effective Capstone Project supervision arrangements and the support students receive from supervisors.

### **Indicator 3.6: Achievements of the Graduates**

*The achievements of the graduates are consonant with those achieved on equivalent programmes as expressed in their assessed work, rates of progression and first destinations.*

#### **Judgment: Addressed**

- Assessments are moderated internally and externally to ensure they are fit-for-purpose and aligned with CILOs, with both pre and post moderation being undertaken (see Indicator 3.3) so that students' achievement can be verified based on careful scrutiny of the work submitted. The Capstone Project (see Indicator 3.5) reflects students' ability to innovate and create a software prototype by applying the skills they have learnt and integrating their knowledge of business and IT. The internship component also ensures that students are able to apply concepts in a real-world environment and develop an understanding of the professional practice of business informatics. In addition to scrutinising the assessed work, UTB seeks feedback from alumni and employers through

regular surveys about graduate destinations and satisfaction with graduates, respectively. The results of surveys are analysed and used to inform programme reviews and make changes to the curriculum to maintain currency and academic standards. Graduates are satisfied with their experience on the programme based on the survey results and this was confirmed by the Panel in interviews with alumni. Similar findings were reported by employers during the interviews who expressed a preference for UTB graduates due to their work ethic and attitude.

- Student progression, retention and completion data is tracked and monitored and reported by cohort in the BSBI Annual Programme Report. Retention rates on the BSBI programme are generally above 95% in the first three years and decline to 83% in the final year. Progression rates of a typical cohort in the first two years are approximately 98%; however, they decrease to 85% in the final two years as the difficulty level of courses increases. The retention rates have been benchmarked to those of local and regional universities. Reasons for students taking a leave of absence from the programme are also monitored and can be primarily attributed to medical issues, finances, family obligations and work commitments which was confirmed in interviews. Due to these reasons and the global pandemic, the average time it takes a student to graduate has increased from 4.8 in 2018/2019 to 5.5 years in 2021/2022. This is also evident in the graduation rates which are tracked and compared to the number of admitted students in each cohort. The high number of credits students must complete (180) to graduate further contributes to the longer timeframe it takes students to finish the programme. The ACDC conducts an annual alumni tracer study to gather information on graduates' first destinations, and the mobility of graduates after initial employment. Prior to the pandemic, 80% of BSBI graduates were employed full-time; post pandemic this had declined to 60% which reflects the current economic climate in the region.

## Standard 4

### Effectiveness of Quality Management and Assurance

*The arrangements in place for managing the programme, including quality assurance and continuous improvement, contribute to giving confidence in the programme.*

#### Indicator 4.1: Quality Assurance Management

*There is a clear quality assurance management system, in relation to the programme that ensures the institution's policies, procedures and regulations are applied effectively and consistently.*

#### **Judgment: Addressed**

- UTB has a quality management system (QMS) which covers all of the different QA functions and processes, and is applied to the BSBI programme. The QMS is detailed in the UTB Quality Manual and Operations Manual and disseminated through the university's website, staff induction, training workshops and committee meetings. During the interviews, the Panel found a strong awareness of QA procedures amongst UTB staff members and active involvement in a range of QA activities. The College CQI Committee has oversight of quality at the College level, while the University CQI Committee, which reports to the University Council, oversees the institutional implementation of the QMS by the QAAD through a comprehensive suite of policies. These include QA-related policies such as the Planning Policy; policies related to institutional and programme reviews; moderation, benchmarking and surveys; and the Internal Quality Audit Policy. The policies are comprehensive and appropriate for the needs of the BSBI programme. They are regularly reviewed, although the Panel noted a number of policies dated September 2016. UTB clarified in interviews that these policies had been reviewed, but no revisions were made, and the last revision date was retained on the policy. The Panel accepts this explanation, but also recommends that the review dates of policies should be recorded in the policy document even if no revisions are made, to provide assurances that the policy remains current.
- The Panel was provided with evidence of the consistent implementation of the QMS in the BSBI programme (see for example Indicators 1.1, 3.1, 3.3, 4.3 and 4.4). The Planning and Development Department within the QAAD, together with the Institutional Research Office, monitors the implementation of plans and KPIs through Accomplishment Reports which are summarized in the institutional Accomplishment Monitoring Report and reported through the QA dashboard. The QAAD also monitors the implementation of the QMS through IQAs and related Improvement Plans, as well as stakeholder surveys; the results of which are posted on internal bulletin boards and on the UTB website providing

a layer of transparency to all stakeholders. In addition to these internal reviews, external assessments by the HEC and BQA are used to inform continuous improvement of the QMS. The use of these diverse mechanisms was evident to the Panel in the comprehensive and rigorous deployment of the QMS to make significant improvements to both the academic and non-academic provisions following the recent change in ownership. The Panel appreciates the transformative efforts and outcomes enabled by the effective, consistent and regular implementation of QA processes to support the continuous enhancement of academic programmes, resources and support services in the University.

#### **Indicator 4.2: Programme Management and Leadership**

*The programme is managed in a way that demonstrates effective and responsible leadership and there are clear lines of accountability.*

##### **Judgment: Addressed**

- The CAFS organisational chart depicts the structure of the College which is primarily responsible for the delivery of the BSBI programme, although the IT courses are delivered by the College of Computer Studies. The Programme Head manages the programme, while Specialisation Co-ordinators, including those from the College of Computer Studies, are responsible for clusters of related courses within the programme. Course Co-ordinators and faculty members report to the Programme Head and are involved in teaching individual courses and overseeing QA processes at the course level. The Programme Head is line managed by the College Dean, who in turn reports to the Vice President for Academic Affairs.
- The College Council is the main decision-making body for CAFS, and it is supported by several committees including the CRC, Instructional Materials and Library Committee and the College CQI Committee amongst others. The Panel learnt from the interviews and from the evidence provided that the committee structure was reviewed and streamlined following the recent change in UTB ownership and the terms of reference of each committee were updated to include responsibilities, deliverables and reporting arrangements. There are appropriate reporting lines which ensure effective communication and decision-making as evidenced in the meeting minutes of the College Council and committees and in interviews with faculty and QA staff during the virtual site visit which showed a clear understanding of where the academic responsibility and custodianship of the BSBI programme academic standards rests. In particular, the Panel appreciates the effective communication on the BSBI programme through regular committee and faculty meetings involving CAFS and the College of Computer Studies staff, to ensure the efficient delivery of the programme and the consistent deployment of QA practices.

### **Indicator 4.3: Annual and Periodic Review of the Programme**

*There are arrangements for annual internal evaluation and periodic reviews of the programme that incorporate both internal and external feedback and mechanisms are in place to implement recommendations for improvement.*

#### **Judgment: Addressed**

- The Policy on Programme Development, Review and Enhancement includes provisions for annual and periodic reviews of programmes. Annual reviews are undertaken at the end of every academic year and result in an Annual Programme Report which includes programme outcomes and accomplishments, performance statistics and survey results. The attainment of PILOs is documented in the Annual Programme Report based on defined assessment methods and components for Bachelor programmes. The Annual Programme Report is prepared based on consolidated Course Review Reports; student and faculty survey results; alumni and employer survey results; and progression, retention and completion tracking data. To externally verify the programme, External Examiners submit comprehensive annual reports evaluating the academic standards based on a range of documents provided by CAFS, including samples of students' assessed work. In addition to these programme-level reports, every College must prepare an annual Self-Evaluation Survey to validate that its programmes comply with the BQA-DHR standards as outlined in the institutional Review and Improvement Policy. The College CQI Committee and QAAD are responsible for following up and monitoring the implementation of any recommendations that arise from the Annual Programme Report, External Examiner reports and the Self-Evaluation Survey, which was confirmed in the interviews. The Panel is of the view that the annual programme review arrangements are appropriate and result in comprehensive outcomes that facilitate continuous improvement of the BSBI programme.
- Periodic programme reviews are undertaken every three to five years. The most recent BSBI periodic review was completed in 2021 and involved an extensive consultation process with a range of internal and external stakeholders, in line with the requirements of the Policy. All aspects of the BSBI programme were reviewed by the PDC and the CRC, including the learning outcomes, curriculum, teaching and learning methods, assessments, learning resources, and admission requirements. Alignment with NQF levels was also undertaken. Various aspects of the programme were informally benchmarked with local, regional and international institutions and feedback was sought from alumni, employers, the PIAP and External Examiners. A Labour Market Scoping Report was also commissioned and the ACM-AIS Curriculum Guidelines were referenced to enshrine professional body requirements into the curriculum. The PDC meeting minutes clearly demonstrate how the feedback collected from the different stakeholders was collated, analysed and used to inform the re-design of the BSBI programme and curriculum. The

number of PEOs and PILOs was reduced, new courses were introduced based on industry feedback, the number of CILOs in each course was condensed, the assessment schedule was updated to include in-course applied projects and a problem-based learning approach was emphasised, and all these changes were confirmed during the interviews. All of the changes made were summarised in the Programme Review Summary Report which clearly details the sources and rationale for the revisions. The Panel appreciates the robust periodic programme review processes that are directly informed by feedback from internal and external stakeholders and reference points, which have resulted in improvements to the BSBI programme.

#### **Indicator 4.4: Benchmarking and Surveys**

*Benchmarking studies and the structured comments collected from stakeholders' surveys are analysed and the outcomes are used to inform decisions on programmes and are made available to the stakeholders.*

##### **Judgment: Addressed**

- UTB has a detailed Benchmarking Policy. Programme benchmarking is undertaken every three to five years to coincide with periodic programme reviews, and course benchmarking is undertaken annually as part of annual programme reviews by the CRC. All of the benchmarking on the BSBI programme has been informal and reliant on desk-based comparisons, although the Panel noted that formal benchmarking occurs at the institutional level and in studies scoping the labour market. Programmes are aligned with QAA-UK Subject Benchmarks to ensure that the academic standards are defined at the appropriate level for a specific subject area. Benchmarking of admissions criteria, human resources practices and library resources is also used to inform decision-making.
- Course-level benchmarking outcomes are detailed in Course Review Reports. Programme benchmarking is discussed and approved by the PDC and the College Council, and a Benchmarking Report is produced once the process is complete. During the recent BSBI periodic programme review, benchmarking of various aspects of the programme was undertaken with some local, regional and international universities. The results and outcomes were presented to the alumni and PIAP during consultative meetings and used to inform improvements. While the Panel is of the view that benchmarking outcomes are utilised effectively to improve the BSBI, it also advises the University to undertake a formal benchmarking at the programme level to ensure a more structured approach based on actual programme and performance data.
- UTB deploys a number of formal surveys to collect feedback from internal and external stakeholders which are detailed in the Institutional Research Manual. The surveys are administered by the Institutional Research Office in line with the University Surveys

Policy and reviewed to ensure they are valid and reliable. Student and staff satisfaction is assessed, and data about graduate outcomes is collected from alumni and employers. Students also evaluate their learning experience and PILO achievement when they graduate. Survey results are discussed in College Council and Academic Council meetings and made available through the UTB website and on notice boards. Recommendations for improvement are made and followed up with relevant units by the QAAD and this was confirmed in interviews. Staff and students were able to provide examples of improvements made based on survey results during the virtual site visit, however the Panel suggests communicating these more formally through similar channels used to disseminate the results.

#### **Indicator 4.5: Relevance to Labour Market and Societal Needs**

*The programme has a functioning advisory board and there is continuous scoping of the labour market and the national and societal needs, where appropriate for the programme type, to ensure the relevancy and currency of the programme.*

##### **Judgment: Addressed**

- The PIAP acts as an advisory board for the BSBI programme, providing real-world input into the curriculum and facilitating opportunities for collaboration with industry for staff and students. The PIAP Policy includes clear terms of reference for the board and defines its composition, which also includes alumni. Members of the PIAP are appointed for a three-year term and the current PIAP membership includes representatives from the private and public sectors. According to the Policy, the PIAP is required to meet five times every academic year, although the Panel noted during the interviews and from the evidence provided that normally only two meetings take place and this understandable since the expected number of meetings is excessive. During the meetings, the PIAP provides feedback on the BSBI programme which is used to inform programme reviews and make changes to the curriculum so that it remains aligned with market needs. Consultative meetings are also held with the PIAP during periodic programme reviews to ensure their input is integrated into programme re-design. A summary of all of the PIAP meetings is prepared annually in a PIAP Report which clearly details all of the recommendations made by the advisory board and the resolutions taken to implement them.
- In addition to the PIAP, alignment with labour market and societal needs is assured through a formal market scoping study which is outsourced to a third party. The 2021-2025 Market Scoping Report is a comprehensive document which analyses UTB's position in the market and assesses its current, as well as future programmes to ensure they remain viable and feasible based on economic and educational indicators. The SER states that the PDC and CRC monitor the effectiveness of these mechanisms to ensure consistent

implementation in line with policies. The Panel is of the view that this needs to be undertaken more systematically, in line with the approach taken to monitor and review the QMS through IQAs (see Indicator 4.1), in order to ensure that the PIAP and market scoping studies remain effective. For example, the number of PIAP meetings every year needs to be reviewed and modified in the Policy document. Therefore, the Panel recommends that the College should deploy a systematic approach to review the effectiveness of the mechanisms used to evaluate and ensure the relevancy and currency of programmes.

## V. Conclusion

**Taking into account the institution's own self-evaluation report, the evidence gathered from the interviews and documentation made available during the virtual site visit, the Panel draws the following conclusion in accordance with the DHR/BQA Academic Programme Reviews (Cycle 2) Handbook, 2020:**

**There is Confidence in the Bachelor of Science in Business Informatics of College of Administrative and Financial Sciences offered by the University of Technology Bahrain.**

**In coming to its conclusion regarding the four Standards, the Panel notes, with appreciation, the following:**

- 1- The systematic follow up and monitoring of remedial programme effectiveness based on student performance on the BSBI programme.
- 2- The effective Capstone Project supervision arrangements and the support students receive from supervisors.
- 3- The transformative efforts and outcomes enabled by the effective, consistent and regular implementation of QA processes to support the continuous enhancement of academic programmes, resources and support services in the University.
- 4- The effective communication on the BSBI programme through regular committee and faculty meetings involving CAFS and CCS staff, to ensure the efficient delivery of the programme and the consistent deployment of QA practices.
- 5- The robust periodic programme review processes that are directly informed by feedback from internal and external stakeholders and reference points, which have resulted in improvements to the BSBI programme.

**In terms of improvement, the Panel recommends that University of Technology Bahrain and/ or the College of Administrative and Financial Sciences should:**

- 1- Define strategic programme-level risks related to the BSBI programme and include these in the Risk Register.
- 2- Review and revise the ILOs to ensure there is an appropriate emphasis on technology and technical skills of graduates in line with its name and mission.
- 3- Review and revise the BSBI PILOs to ensure that they are clear, related to distinct skills and competencies, and measurable.
- 4- Review and update the pre-requisite courses in all programme documents, including the Curriculum Flowchart, study plan and Course Specifications, for accuracy and ensure they are correctly stated.

- 5- Review and update the BSBI courses to include additional topics and learning materials which integrate business and IT concepts in line with the PILOs.
- 6- Update the learning materials listed in the BSBI Course Specifications to ensure they are current and appropriate.
- 7- Adopt a more systematic and integrated approach to facilitating exposure to professional practice, ensuring students consistently benefit from applied learning.
- 8- Review the CAFS faculty profile and ensure that there are sufficient academic staff at senior ranks to support the programme's delivery and its research aspirations as a university.
- 9- Review academic staff workloads to ensure they are appropriate and reflect the full scope of activities that faculty engage in.
- 10- Provide first aid kits at different locations on campus to ensure that immediate medical attention can be given when required.
- 11- Prioritise the implementation of the new student information system EMADA to facilitate improved decision-making and automate key processes such as academic advising and monitoring at-risk students
- 12- Develop and implement relevant mechanisms to evaluate the effectiveness of the student induction arrangements.
- 13- Develop planned opportunities for students to engage in extra-curricular activities which are evaluated for effectiveness.
- 14- Implement appropriate software tools for detecting plagiarism in courses which involve programming and coding.
- 15- Review the effectiveness of the processes for deterring and detecting plagiarism and develop a holistic approach to fostering a culture of academic integrity.
- 16- Record the review dates of policies in the policy document even if no revisions are made, to provide assurances that the policy remains current.
- 17- Deploy a systematic approach to review the effectiveness of the mechanisms used to evaluate and ensure the relevancy and currency of programmes.