هيئة جودة التعليم والتدريب
Education & Training Quality Authority
KINGDOM OF BAHRAIN مـمـلـكـة الـبـحـريـن

Directorate of Higher Education Reviews

Programme Review Report

University of Bahrain
College of Health and Sport Sciences
Bachelor in Radiologic Technology (Diagnostic)
Kingdom of Bahrain

Site Visit Date: 22 – 24 April 2024

HA120-C3-R120

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Acronyms

AHD	Allied Health Department
APR	Academic Programme Review
BQA	Education & Training Quality Authority
BRT	Bachelor in Radiologic Technology
CHSS	The College of Health and Sport Sciences
CILO	Course Intended Learning Outcome
DHR	Directorate of Higher Education Reviews
HEC	Higher Education Council
HEA	UK Higher Education Academy
IT	Information Technology
MIS	Management Information System
NQF	National Qualifications Framework
PAC	Program Advisory Committee
PEO	Program Educational Objective
PILO	Program Intended Learning Outcome
QA	Quality Assurance
QAAC	Quality Assurance and Accreditation Center
SAC	Students Advisory Committee
SIS	Student Information System
ToR	Terms of Reference
UILO	University Intended Learning Outcome
UTEL	Unit for Teaching Excellence and Leadership
UoB	University of Bahrain

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 of 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 judgements 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 judgement, as shown in Table 1 below.

Table 1: Criteria for Judgements

Criteria	Judgement
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 **Standard 1** is not satisfied	

The APR Review Report begins with providing the profile of the programme under review, followed by a brief outline of the judgement 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 Bahrain
College/ Department*	College of Health and Sport Sciences
Programme/ Qualification Title*	Bachelor in Radiologic Technology (Diagnostic)
Qualification Approval Number	Q21-024
NQF Level	8
Validity Period on NQF	5 years from the validation date
Number of Units*	36
NQF Credit	549
Programme Aims*	1. Develop accountable, reliable, and competent diagnostic radiologic technologists who are capable of working in all areas of radiology and medical imaging, 2. Graduate lifelong learners, who are capable of developing and integrating their knowledge and skills through continuing education. 3. Promote professionalism in radiologic sciences that are demonstrated by the graduates' standards of practice, patient confidentiality, values and code of ethics. 4. Prepare graduates who are able to create and sustain a caring environment utilizing critical thinking, leadership, communication, and basic research skills, 5. Meet the needs of the society by graduating radiologic technologists who are aligned with international standards.
Programme Intended Learning Outcomes*	a. Integrate knowledge, skills, and values to provide patient centered care. b. Implement appropriate radiological procedures to ensure safety, accuracy, and quality. c. Adhere to the legal requirements of the Kingdom of Bahrain and apply professional code of ethics throughout practice. d. Research, evaluate and share up-to-date information and technology advancement related to radiology and medical imaging and modify standard procedures accordingly. e. Critique radiographic images. f. Recognize the importance of patient confidentiality. g. Contribute to patient care and wellbeing by providing education to

	individuals and groups in order to facilitate improvement and promotion of health. h. Demonstrate effective communication skills including utilization of information technology. i. Apply leadership principles to enhance patient care and inter / intra-professional relationships with proper utilization of resources. j. Appreciate, exhibit pride and loyalty, communicate the value of their professional roles in society and possess potential to improve it. k. Be proactive in identifying one's on-going learning needs and engage actively in fulfilling them.

* Mandatory fields

III. Judgement Summary

The Programme's Judgement: Confidence

Standard/ Indicator	Title	Judgement
Standard 1	**The Learning Programme**	**Satisfied**
Indicator 1.1	The Academic Planning Framework	Addressed
Indicator 1.2	Graduate Attributes & Intended Learning Outcomes	Addressed
Indicator 1.3	The Curriculum Content	Partially Addressed
Indicator 1.4	Teaching and Learning	Addressed
Indicator 1.5	Assessment Arrangements	Addressed
Standard 2	**Efficiency of the Programme**	**Satisfied**
Indicator 2.1	Admitted Students	Addressed
Indicator 2.2	Academic Staff	Partially Addressed
Indicator 2.3	Physical and Material Resources	Partially Addressed
Indicator 2.4	Management Information Systems	Addressed
Indicator 2.5	Student Support	Addressed
Standard 3	**Academic Standards of Students and Graduates**	**Satisfied**
Indicator 3.1	Efficiency of the Assessment	Addressed
Indicator 3.2	Academic Integrity	Addressed
Indicator 3.3	Internal and External Moderation of Assessment	Partially 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	Partially Addressed
Standard 4	**Effectiveness of Quality Management and Assurance**	**Satisfied**
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	Partially Addressed
Indicator 4.4	Benchmarking and Surveys	Partially 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.

Judgement: ***Addressed***

- The Bachelor in Radiologic Technology programme (BRT) is delivered by the Allied Health Department (AHD) at the College of Health and Sport Sciences (CHSS) of the University of Bahrain (UoB). The BRT programme was established in the academic year 2015-2016, and the first batch graduated in 2019. The programme follows a clear framework as per the university's Academic and Administrative Bylaws, Regulations for Offering and Developing Academic Programmes and Courses, the Quality Manual, and the Teaching and Learning Policy. Evidence of undertaking a planning process for the RRT programme to ensure the programme's relevance and fitness for purpose was provided to the Panel, including the benchmarking report of 2019-2020, and meeting minutes of the Programme Advisory Committee (PAC) and Student Advisory Committee (SAC).

- The Self Evaluation Report (SER) states that the quality of the programme delivery and its academic standards are regularly reviewed, and potential risks are identified and acted upon. The Panel was provided with the risk register document for the academic year 2022-2023, which includes six potential risks and the proposed actions for their mitigation. Potential risks include, shortage of Ph.D. staff, lack of some instruments required for students training, and increased students' intake. The risk register shows the percentage of achievement with regard to the mitigation measures of each potential risk, which ranges from 10% as in the risk of 'failure to maintain balanced staff load' to 80% as in the risk of 'increased students' intake with possible delay in graduation'. The Panel noticed that the percentage of achievement of the mitigation measures for most of the potential risks is below 50%. The Panel, hence, recommends that the College should continuously monitor

potential risks and implement an urgent action plan to address these risks in order to ensure the programme's resilience and effectiveness in addressing emerging challenges.

- The BRT programme was placed on the National Qualifications Framework (NQF) in February 2023 at Level 8, with a total of 549 NQF credits. The SER details the process followed to ensure the programme adherence to the NQF requirements as well as related mapping and confirmation processes.

- As per the SER and the sample of student certificates, the programme title is 'Bachelor in Radiologic Technology – Diagnostic'. However, the Panel notes that the title of the programme on the university website is 'Bachelor in Diagnostic Radiologic Technology'. The Panel also notes that while the term 'radiology' refers to the use of radiation, many imaging modalities are non-radiation, such as ultrasound and magnetic resonance imaging, which are included in the programme. Additionally, the use of the term 'technology' could restrict the professional growth of Radiological Technologists (Radiographers) in their advanced practice. Hence, the Panel suggests amending the title of the programme to encompass all imaging modalities to better reflect the programme content.

- As per the Programme Specifications document, the BRT programme has five clear Programme Educational Objectives (PEOs), which were last revised in November 2020. The SER states that PEOs were developed based on feedback collected from various stakeholders. The benchmarking report of 2019-2020 includes the benchmarking of the PEOs with similar three regional programmes. The Panel learned during interviews with faculty and senior management that the programme team ensures that the programme contributes to the achievement of the college and institution missions and strategic goals through the alignment of the programme mission, vision and PEOs with the CHSS and UoB mission and vision. This was also confirmed by the Panel from the provided evidence.

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: ***Addressed***

- As per the SER, graduate attributes are defined at the institutional level in the six University Intended Learning Outcomes (UILOs). These attributes are also embedded in the Programme Intended Learning Outcomes (PILOs) and the PEOs. The BRT programme

has 11 PILOs, which are stated in the Programme Specifications document and published on the university website. The PILOs are correctly mapped to the PEOs and UILOs.

- The Panel examined the PILOs and is of the view that they are measurable and appropriate for the programme's type and level. However, the Panel suggests revisiting PILO (J) 'Appreciate, exhibit pride and loyalty, communicate the value of their professional roles in the society and possess potential to improve it', as it requires further clarity. Evidence was also provided on the PILOs meeting the NQF requirements, focusing on key skills and ensuring measurability through a structured mapping process. Furthermore, the benchmarking report of 2019-2020 includes the benchmarking the PILOs with three similar regional programmes. The Panel suggests benchmarking the PILOs against international professional standards such as the College of Radiographers-UK (CoR), the American Society of Radiologic Technologists (ASRT), and the Canadian Association of Medical Radiation Technologists (CAMRT).

- The Panel examined samples of course specifications and noticed that the Course Intended Learning Outcomes (CILOs) are clear and appropriate for the course level and contents. As per the SER, all CILOs have been tailored to correspond with the course NQF level. This was evidenced through the detailed mapping exercises as indicated in various documents provided to the Panel. Evidence for mapping of CILOs with PILOs was also provided to the Panel, which demonstrates appropriate mappings.

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 curriculum of the BRT programme underwent a major revision in 2018. The programme is a 4-year (8-semester) programme with 133 credit hours (549 NQF credits), including 27 credit hours of clinical training. The study plan of 2018 shows well-balanced and manageable student workload through structured credit hours distribution, a blend of theoretical and practical training, and a progressive complexity in course content. It also includes an appropriate list of major prerequisites (57% of the curriculum).

- The Panel notes the inclusion of the 'Forensic Imaging' course (RAD 432) in the study plan. However, given that this topic has limited job opportunities for radiologic technologists as well as limited practice areas, the Panel advises that this course be offered as an elective rather than a core course. On the other hand, 'Computerized Tomography' (RAD 331) would be better to be moved from an elective to a core course, as advised by international

professional standard associations (ASRT, CAMRT, and CoR). The Panel also suggests introducing new electives with two main components (Nuclear Medicine, and Introduction to Radiotherapy).

- The Panel was provided with evidence demonstrating the changes made to the current study plan in comparison with the study plan of 2015. Furthermore, the benchmarking report of 2019-2020 shows a benchmarking exercise with the curriculum in similar three regional programmes. However, since 2018 no changes have been made to the curriculum. The Panel is of the view that the fast-paced advancements in medical imaging and technology call for more frequent and thorough updates to ensure that the curriculum remains relevant to modern innovations in radiologic practice. Hence, the Panel recommends that the College should review the curriculum of the BRT programme and benchmark it with standards of international professional associations to ensure that the programme is relevant to recent updates in the field and caters for the market needs.

- The study plan includes an appropriate balance between theoretical knowledge and practical skills. The programme involves 27 clinical training credit hours with academic coursework, which aligns with professional standards. In courses other than the clinical training, the Panel noticed that some courses include practical or laboratory components. However, a lack of clarity on how practical or laboratory components are effectively integrated into the coursework was also observed. The Panel, hence, recommends that the College should ensure that the practical element is clearly defined in all related courses.

- The Panel examined samples of course specifications and noticed that the curriculum covers, by large, the required depth and breadth. However, some courses require further improvements in terms of clarity and relevance of their content. For instance, the 'Advanced Imaging II' (RAD 416) course syllabus includes repeated basic radiography topics (such as skeletal, chest, and abdomen imaging) already covered in earlier courses; mixes CT principles with advanced procedures; and the MRI segment is disorganized, covering topics haphazardly. The 'Pharmacology for Radiology' (PHAM 321) course introduces fundamentals of pharmacology relevant to radiography practice, however, integrating patient care management and extensive knowledge of contrast media into the course would deepen its content, aligning more closely with the practical needs of radiologic technologists. The Panel is also of the view that the 'Magnetic Resonance Imaging' (RAD 332) course should incorporate contrast media in MRI, emphasizing emerging MRI technologies and their clinical applications, which would equip students for future field advancements. Also, while the 'Advanced Imaging I' (RAD 317) structure is commendable for its breadth, elements like pediatric radiography and mammography, although vital, may not align with advanced imaging. Therefore, the Panel recommends that the College should review all course syllabi to ensure its adequacy in terms of depth and breadth, clarity, and relevance of their content.

- Upon reviewing the textbooks and references listed in the course syllabi, the Panel confirmed that most of them are suitable and appropriate for their respective courses. While most textbooks are foundational and highly relevant, the Panel suggests incorporating a broader resource range to further enhance the curriculum.

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***

- UoB has a Teaching and Learning Policy which highlights the key domains that encourage students to be active members in their learning. These are: designing of interactive learning materials and assessment, integration of technology enhanced learning, incorporating life-long learning skills, and supporting research informed teaching and learning.

- Based on careful scrutiny of course portfolios, the Panel observed that certain courses like 'Advanced Imaging I' (RAD 317) incorporate videos and laboratory demonstrations. The 'Computerized Tomography' (RAD 331) course uses group discussions and image interpretation. However, there is a notable reliance on traditional lecture formats in some courses. Additional teaching methods such as guest lectures from radiation safety officers, interactive simulations, and site visits to radiology departments could be integrated into the 'Radiobiology' (RAD 431) course. The absence of detailed information on the application of varied teaching methods, particularly how practical and laboratory components are employed, reflects a gap in the programme's instructional approach. The Panel, thus, recommends that the College should employ a variety of teaching and learning methods as well as a range of pedagogical approaches, such as image session, simulations, and projects, alongside a detailed explanation of their implementation to support the delivery of the programme.

- AHD effectively integrates e-learning into its teaching and learning methods by utilizing the Blackboard platform, which grants students access to course materials, assessments, learning activities, and discussion forums. During the site visit, a demonstration for the usage of Blackboard was given. UoB also has a dedicated E-Learning Center. However, the Panel suggests that the AHD clearly defines its e-learning strategy within the curriculum and detailing the use of digital technologies to achieve the learning outcomes.

- During interviews with senior management, creative and innovative aspects of students' learning were discussed, in addition to the approaches to provide students with exposure to professional practice. The Panel notes that UoB learning environment encourages

students' participation in learning and promotes the concept of lifelong learning by encouraging varied educational strategies and problem-based learning.

- Based on the course syllabi, the emphasis of the BRT programme has predominantly been on formal learning through structured courses, including theoretical lectures and practical laboratories. However, explicit instances of encouraging informal and non-formal learning—such as participation in study groups, independent research beyond coursework, involvement in community projects, or engagement in professional radiology networks and events—were not distinctly highlighted in the syllabi provided. The Panel suggests systematically incorporating informal and non-formal learning opportunities, such as peer-led study sessions and professional workshops and expanding research exposure beyond the capstone project to earlier stages in the curriculum.

- Within the programme, there is also a strong emphasis on research ethics, with academic staff actively encouraging students to uphold principles of honesty and integrity. In the capstone course, 'Project Writing' (RAD 408), instructors provide students with comprehensive information on the requirements of ethical conduct of research, including guidelines on research ethics and academic integrity. The research projects require ethical approval from the College Scientific Research Committee. In addition, the 'Research Methods' (SBS 320) course covers research methodology, types of research, sampling, and data collection.

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***

- The assessment framework at UoB includes policies, procedures, regulations, manuals and handbooks such as the Regulations of Study and Examination, the Moderation of Assessment Regulation, the Anti-Plagiarism Policy, the Quality Manual, and the Teaching and Learning Policy, which are accessible *via* UoB's website, and disseminated to students through Blackboard.

- The BRT programme employs a range of assessment methods that align with the university's Study and Examination Regulations. There is a fair and stringent assessment in place, in addition to moderation procedures, which include pre- and post-assessment moderation of assessments. The provided evidence shows that assignments, case studies, projects, and clinical practice assessments are marked with pre-defined rubrics, and they are also checked for plagiarism as per the Anti-Plagiarism Policy. The programme follows UoB's regulations regarding assessment feedback. The feedback is given, individually and

in groups, both verbally and written, within two weeks of the assessment activity. The Panel suggests optimizing the use of the Blackboard system for immediate feedback and incorporating additional e-learning tools to foster efficient and interactive communication between students and instructors.

- The BRT programme has established provisions for addressing academic misconduct and appeals by students. This is supported by the utilization of plagiarism detection tools alongside detailed policies outlined in the Students' Rights and Duties Guide, the Study and Examinations Regulations, and the Anti-Plagiarism Policy. Additionally, the programme has specific procedures for handling cases of academic misconduct and a structured process for students to appeal their grades, which ensures that students have clear avenues for addressing concerns related to academic integrity and assessment outcomes.

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.

Judgement: ***Addressed***

- The BRT programme follows UoB's admission requirements, which are available on the university website. As per the university requirements which was last updated in 2022, applicants must possess a secondary school certificate or its equivalent, with a total minimum grade of 90% (science track only). In addition, applicants should pass the admission test and an interview. Evidence was provided on introducing a new interview form in 2022. The interviews with different stakeholders confirmed that the admission requirements are consistently implemented and ensure that appropriate students are accepted on an equal basis between females and males.

- The BRT programme provides structured access, progression, and credit transfer options guided by university regulations. Remedial support measures for inadequately prepared students are in place. A foundation semester is provided to enhance their competencies in English language as well as in other areas to prepare them for the programme. The SER did not reflect on the process for internal and external credit transfer. During the site visit interviews with the senior management, the Panel was informed that internal and external credit transfers are permissible according to clearly defined criteria, which are outlined in the Study and Examination Regulations. However, no such transfers have been undertaken.

- As per the SER, admission criteria are regularly updated by the Committee for Admission and Supreme Admission at the university level. However, no evidence was provided on collecting feedback from relevant stakeholders about the admission criteria. Therefore, the Panel suggests involving the relevant stakeholders in the revision of the admission criteria, in the next periodic review of the programme.

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.

Judgement: ***Partially Addressed***

- As per the SER, UoB has adequate policies and regulations for the recruitment, induction, appraisal, and promotion of academic staff, which are consistently implemented in a transparent manner. There are proper induction and orientation programmes in place for newly appointed faculty members, in addition to the training workshops and programmes provided by the Unit for Teaching Excellence and Leadership (UTEL). There is a rigorous appraisal process which has clear criteria and is supported with detailed performance rubrics. The appraisal of the faculty members is conducted annually and is taken into consideration for contract renewals. Academic Promotion Regulations are in place at the university level. Overall, the Panel is of the view that the applied policies and procedures are appropriate.

- Faculty members are required by the Academic Staff Bylaws to dedicate part of their workload to research activities. This is further emphasized in the College Strategy and UoB's Academic Promotion Criteria. The Scientific and Research Committee offers research capacity building seminars at the college level. The Panel is satisfied that there are policies and procedures that ensure the quality of scientific research carried out by the faculty members. However, the Panel noticed discrepancy in the cumulative scientific productivity of the faculty, as some produced more research than others. In the Annual SERs, lack of grants, financial support, infrastructure, equipment and consumables were stated as deficiencies that impede the faculty from conducting research. Faculty engagement in committee work was also mentioned as an obstacle to conducting research. During interviews with faculty members, the Panel realized that they are aware of the gaps in faculty development in specific areas, such as research opportunities, infrastructure, equipment, and consumables for laboratory-based research, as well as robust intramural and extramural research fundings. The Panel recommends that the College should set an urgent action plan to provide the faculty with necessary facilities and funds as well as reducing their workload to increase their research productivity.

- As indicated in the SER, the UoB Bylaws were last revised in June 2011, and as confirmed during interviews with senior management and faculty members, the teaching load of 12 hours is assigned to Assistant Professors and above, while Senior Lecturer/ Lecturer/ Instructors are assigned a teaching load of 15 hours. As per the UoB Bylaws, the extra workload is being compensated. However, it was not clear how the BRT programme at the UoB specifically manages the academic staff workload to ensure that it is appropriate

and accommodates research and community engagement activities. The Panel suggests developing detailed workload guidelines at the college level, covering teaching, research, and community engagement, and providing flexibility for all staff. The Panel also suggests incorporating faculty feedback in the revision of workload distributions, which should be conducted on a regular basis.

- As evident from the SER and the Faculty Data document, there is one Assistant Professor and one Senior Lecturer delivering the BRT programme. They are being supported by four Teaching and Research Assistants. The Panel is of the view that the number of faculty is critically inadequate to deliver the programme. As per the SER, the recruitment of one Professor and one Assistant Professor has recently been finalized. During the interviews, the Panel learned that budget shortage is a critical issue that impedes the recruitment of sufficient number of faculty. Given that the number of students enrolled in the programme in the academic year 2022-2023 is 420, the Panel is of the view that the number of faculty needs to be further increased. The Panel, hence, recommends that the College should recruit additional senior faculty members in different specializations with clinical experience to supervise students' clinical practice.

- UoB has policies and arrangements in place that support the professional development needs of its staff. The faculty is required to attend a minimum of three workshops per academic year. Evidence was provided on active participation of faculty members in various professional development activities, including capacity-building workshops organized by UTEL, seminars, conferences, and programmes accredited by UK Higher Education Academy (HEA). Professional development activities related to research are also in place, such as the research seminar on 'Key principles of writing for scientific research publication' conducted by the College. The Quality Assurance and Accreditation Center (QAAC) regularly collects feedback from faculty members regarding their satisfaction with services, teaching, research, and professional development needs. The Panel appreciates that the arrangements in place for faculty development are consistently implemented, monitored and evaluated.

- The Panel was provided with statistics of faculty turnover and retention rate for the last three academic years from 2021-2022 to 2023-2024, which show a constant retention rate. However, retaining qualified staff has been identified as a 'challenge' in the SER. The Panel was also provided with sufficient evidence of measures taken for ensuring staff retention, including competitive salary packages and extra steps for excellent and distinguished candidates.

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.

Judgement: ***Partially Addressed***

- The Panel visited the College during the site tour, which houses 23 classrooms equipped with data projectors, white screens, whiteboards, and internet-connected computers. However, none of the classrooms is large enough to accommodate the entire batch of students (approximately 100 students/batch). There is a computer laboratory which is shared by different programmes. For the BRT programme, the CHSS has assigned a separate building to establish a skills laboratory (simulation laboratory), which will have facilities such as mobile X-ray unit, ultrasound units, BMD portable unit, ABI unit, and other equipment and accessories. For clinical training, the students visit Al Salmaniya Medical Complex and health centers.

- The Panel is of the view that the existing laboratory facility is not sufficiently equipped. For instance, a simulation laboratory should be established and equipped for both general and advanced imaging. Simulation software should also include Ziltron, Clover Learning's RadTech BootCamp, DICOM viewers, and CT and MRI. Additionally, radiation measurement devices such as RaySafe and Piranha are essential. Upgrading the current mobile X-ray machine to a full general X-ray machine is necessary. The programme should also have phantoms for practicing radiography to ensure the quality of the learning process. Thus, the Panel recommends that the College should enhance the programme facilities including classrooms, laboratories, equipment, and learning spaces, to foster a more conducive learning environment and cater for the increasing number of students. The Panel also recommends that the College should establish a simulation laboratory with advanced imaging modalities and software.

- The University Teaching and Learning Policy promotes Information Technology (IT) utilization in teaching and learning. Students are provided with Wi-Fi access, and email services. The Blackboard and Microsoft Teams platforms support students' learning and assessments. There are also two libraries at UoB, one on the Salmaniya campus named 'Ahmed Al Farsi Library' and the other at the UoB main campus. The Panel visited the library premises in the Salmaniya campus, which is of an appropriate size and seating capacity. The library resources, including electronic resources, that serve the BRT programme are adequate for the programme's needs. Ahmed Al Farsi Library supports the students with extensive library hours and offers a variety of study rooms for group discussions and is equipped with computers for research activities. Moreover, there is also

an online library portal through which students can remotely access journals and other scientific literature.

- UoB has a formal mechanism to ensure the maintenance and adequacy of its resources, including facilities, equipment, technology, and infrastructure. This mechanism involves regular maintenance schedules overseen by the CHSS Facilities/Occupational Health and Safety Committee. Continuous evaluations and feedback from faculty and students contribute to ongoing improvement efforts. However, the programme facilities need to be improved as stated earlier in this Indicator.

- During the site visit tour, the Panel noted that the UoB campus is equipped with clear health and safety instructions for all its academic and operational functions. The Health and Safety Committee at the CHSS forwards maintenance requests to the university's Maintenance Department for action. During the campus tour, the Panel noticed that some exit signages were deficient in the corridors. The Panel also noticed that the last modification to the submitted Laboratory Health and Safety Guidelines was in February 2020. Therefore, the Panel recommends that the College should ensure updating all signages at the college premises as well as the health and safety provisions.

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.

Judgement: ***Addressed***

- The University has a Student Information System (SIS) to manage all information related to academic programmes and students. During the site visit, the Panel was provided with a demonstration of the SIS system, which showcased its ability to facilitate informed decision-making and streamline operations. Further evidence was also provided on utilizing generated reports from SIS and the Learning Management System (LMS) in decision making at the department level. In addition, there is a Communication Management System (Docutrack), which is used for digital communication of cases where specific actions are required.

- UoB has implemented policies and procedures to ensure the security and accuracy of learners' records. Secure databases and limited access to authorized personnel are in place to protect sensitive information. Information regarding the issuance and replacement of graduation certificates can be found on the university's website. This ensures transparency and accessibility for all stakeholders. During the virtual site visit, the Panel confirmed that the awarded certificates and transcripts are accurate and issued in a timely manner.

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.

Judgement: ***Addressed***

- Various student support measures such as induction day for newly admitted students, student service center, e-learning platform, student guide, and counseling support, etc., are offered by the College and the University. The library offers adequate support to students through services such as the reserve collection, information literacy training, and library induction. Robust technical support for the LMS is also provided to students and faculty. Students and staff affirmed that the University provides comprehensive guidance and assistance to ensure the effective utilization of the LMS in addition to the support offered by the E-learning Center and the IT Center in providing seamless access to online platforms and assistance with IT resources.

- The SER describes the provision for career guidance and counseling support provided by the University. As a part of career guidance, CHSS in collaboration with the Business Incubator Center at UoB conducts workshops for students to empower them in making informed career choices and achieving success in the workforce. Career fairs are organised to facilitate student engagement with companies and institutions. The SER also mentions that there are provisions for part-time employment services for students in the University. During the site visit, students and alumni confirmed that the Career Guidance Office organizes regular career fairs and internship opportunities. Hence, the Panel appreciates the efforts exerted by the College and the Business Incubator Center at UoB on career guidance of students and on employing students at the University.

- As per the SER, arrangements are in place for inducting newly admitted students. The Undergraduate Students Induction Day, organized by the Guidance and Counseling Department, introduces first-year students to the university's culture, values, academic procedures, and available services. The CHSS and the AHD also hold induction days to acquaint students with their respective programme offerings. In addition, comprehensive information regarding the regulations and services can be found on the university's website.

- Academic advising is provided to all students, with each student being assigned an academic advisor as per Academic Advising Regulations. The SIS facilitates efficient communication between advisors and students. At the BRT programme, the ratio of students to faculty is high, thus, the number of students assigned to each individual faculty for academic advising is also high, which raises concerns about the appropriateness of the workload for effective academic advising (see Indicator 2.2). Hence,

the Panel is of the view that recruiting more faculty members will enhance academic advising (see Indicator 2.2).

- The AHD monitors and provides support to at-risk students, who are identified based on their Cumulative Grade Point Averages (CGPAs), through an online Academic Advising System. Adequate measures are also implemented to support students with special needs and address the specific needs of women. Currently, no students with special needs are enrolled in the programme.

- UoB regularly assesses and improves its support services to meet the needs of its staff and students. Through continuous evaluation and gathering feedback, the University identifies areas for enhancement and makes the necessary adjustments. The conducted surveys show a high level of satisfaction with UoB support services.

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.

Judgement: ***Addressed***

- The assessment methods of the BRT programme adhere to the UoB Assessment Policy, which includes both summative and formative assessments. The assessment moderation processes ensure the validity and reliability of assessment methods as well as the appropriateness of academic standards. There are also continuous reviews and updates of course assessments, which ensure their validity and reliability. As per the SER, the assessments include quizzes, assignments, projects, case studies, manuscripts, and posters. The Panel notes that BRT assessments increase in complexity depending on the individual course CILOs and the level of the course.

- The BRT programme has a mechanism in place to ensure the alignment of assessments with the learning outcomes The mappings of the assessments to CILOs and the CILOs to the PILOs are revised by the AHD Curriculum Committee and external moderators. The Panel was provided with the CILOs-PILOs assessment reports which were submitted along with e-portfolios as evidence. These reports show the attainment level of each CILO and PILO by the students, according to the results of the summative assessments in each course. Based on the attainment level of CILOs-PILOs, improvements are made at the programme and course levels. The moderation of assessments and course portfolios' audits are also used as mechanisms for monitoring and improving the assessments. The Panel confirmed from the interviews with different stakeholders that these mechanisms are in place.

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).

Judgement: ***Addressed***

- The BRT programme adheres to the UoB regulations on academic misconduct, cheating, and plagiarism. These regulations are presented in the booklets of Students Rights and Duties Guide, Study and Examinations Regulations, the Anti Plagiarism policy, Students Misconduct Bylaws and the University Regulation for Professional Conduct Violations. Additionally, faculty members explain to the students the academic integrity guidelines and encourage them to adhere to the Anti-Plagiarism Policy which is available on UoB's website.

- Evidence was provided on utilizing the Blackboard (SafeAssign) tool for detecting plagiarism in written projects. However, the acceptable percentage of similarity for written assignments is not explicitly mentioned in the provided documents. Students are permitted to resubmit their assignments if the percentage of similarity is high, but the number of allowed resubmissions is not specified. Therefore, the Panel recommends that the College should set up a clear percentage for the acceptable similarity in written assignments by students, and a cap for the permitted times of resubmission of students' work.

- Any detected case of plagiarism is dealt with by the AHD as per the UoB regulations. The Panel was informed of the actions taken for cases of misconduct during interviews with the senior management. Cases of misconduct or cheating during examinations, are referred to the Misconduct Committee to take the appropriate actions in line with UoB regulations.

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.

Judgement: ***Partially Addressed***

- The BRT programme abides by the university's Assessment Moderation Policy, which includes clear provisions for the internal and external moderation of assessments. The Panel confirmed from the evidence provided that all major assessments including the two midterms and final examinations are internally moderated according to a course rolling plan. Internal moderators are selected in accordance with UoB's Moderation of Assessment Regulation, which includes details on the selection process and criteria for selecting moderators. The moderator should be well-oriented with the course material or have teaching experience.

- As per the Moderation Policy, the programme implements two types of internal moderation, pre- and post-moderation. The submitted evidence includes samples of pre- and post-moderation forms with the course coordinators' responses. The feedback collected from the moderation forms is compiled and analyzed by the Moderation Committee, which develops an assessment improvement plan for the AHD.

- The SER states that the BRT programme planned to implement the external moderation process in 2023. The AHD meeting minutes of 25 October 2023 shows the approval on assigning one external moderator to moderate four BRT courses. The AHD moderation committee meeting minutes of 25 December and 31 December 2023 show discussion of the external moderation findings and preparation for the next cycle of external moderation.

- The Panel was provided with the moderation committee analysis report that includes recommendations to improve the moderated courses (RAD 206, RAD 317, RAD 341 and RAD 431). However, no evidence was provided on the evaluation of the effectiveness of the moderation process, nor did the SER include any information on this process. The Panel did not receive a clear clarification on this matter during the interviews. Thus, the Panel recommends that the College should develop and implement a mechanism for the evaluation of the moderation process effectiveness at the programme level.

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.

Judgement: *Partially Addressed*

- In the BRT programme, the work-based learning occurs during the students' laboratory and clinical training in hospital settings. The BRT programme comprises five training courses at different levels to cover the various skill levels for graduating a competent radiologic technology professional who can work effectively in healthcare settings. These are, 'Clinical Skills I' (RAD 227); 'Clinical Skills II' (RAD 326); 'Clinical Skills III' (RAD 327); 'Clinical Skills IV' (RAD 426); and 'Field Practice' (RAD 450). The five courses are mandatory major requirement courses that carry 21 credit hours and 81 actual training hours. The Panel is of the view that each practicum course has a set of appropriate pre-requisites. The practicum structure is also adequate and sufficient to ensure that students gain the necessary hands-on experience and skills to meet professional standards.

- The BRT programme has a training agreement with the Ministry of Health to provide training for students in three hospitals and around 22 health care and specialty centers. To ensure an equivalent experience amongst all students, students are rotated in training sites

in each clinical course. The rotation among the training sites enables each student to be evaluated by different preceptors, which ensures fairness in assessment. However, feedback from clinical preceptors pointed to the large number of students in each training group. Students' surveys have also referred to issues associated with the large group of students per training site, and the need to establish partnerships with advanced imaging centers. Hence, the Panel recommends that the College should reduce the size of students in training groups and expand its partnerships with advanced imaging centers.

- The SER states that the training is guided by the policies and regulations of UoB, including the Teaching and Learning Policy and Regulations of Study and Examination. From interviews, the Panel learned that students and academic supervisors are provided with the relevant information about the practicum courses and their roles. During the site visit, the Panel was also provided with the BRT Clinical Education Policy (undated), which shows the preceptors role in clinical training. The Panel suggests adding the effectivity date and the expected revision date on the policy's cover page.

- As per the SER and the five clinical course specifications, each clinical training course has clear CILOs that are mapped to the PILOs. Additionally, the clinical training assessment, presented in the course specifications, includes different types of assessment that cover all the relevant programme competencies and mapped to the CILOs. The assessment of the clinical training consists of compliance with guidelines (15%); clinical attendance (5%); assignments-logbook (10%); reflective reports (20%); and final clinical examination (50%). The Panel noted from the interviews that preceptors and academic supervisors are involved in the student's assessment and evaluation. This practice ensures a comprehensive evaluation of the student's performance.

- According to the SER, the effectiveness of the clinical training courses is evidenced by the overall attainment level of the PILOs in the academic year 2022–2023, which amounted to 86%. During interviews, most students and alumni were satisfied with the skills they gained from the training.

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.

Judgement: ***Addressed***

- The BRT study plan of 2018 includes a 'Graduation Project' course (RAD 408) in which the students must conduct a research project in their final semester. The Course Specifications

document demonstrates that the CILOs are mapped to the PILOs, which confirms that the capstone project component contributes effectively to the achievement of the PILOs. The Panel examined sample of the graduation projects and noticed that they reflect strong grasp of essential radiologic concepts and demonstrate the student's ability to engage in multidisciplinary approaches, particularly communication and patient interaction. To further enhance the quality of these projects, the Panel suggests providing more opportunities for students to engage in advanced imaging techniques and more complex research methodologies. This would improve their technical skills and prepare them for professional challenges in rapidly advancing fields like radiologic technology.

- The roles and responsibilities of the supervisors and students are clearly stated in the Senior Project Guidelines of UoB and are communicated to all stakeholders. The progress of students in the graduation project is monitored by their supervisors through regular scheduled meetings, progress reports, and teamwork engagements. However, there is no evidence of monitoring students' satisfaction with the graduation project supervision process and resources. During the interviews with the senior management of the programme, the Panel learned this is an area for improvement that will be taken into consideration**.** Thus, the Panel recommends that the College should develop a mechanism to monitor students' satisfaction with the supervision process and the resources available to carry out their graduation project.

- The BRT programme has an appropriate mechanism for assessment of the graduation project. At the end of the graduation project course, students submit a manuscript that is approved and signed by their respective supervisors, which accounts for 40% of the final grade of the course. This is followed by a group presentation of the project and submission of a poster. Two faculty members, not involved in supervision, assess the presentation and the poster and this accounts for 20% of the final course grade. The *viva* and the abstract are allocated 40% of the course grade.

- As per the SER, the graduation project course is evaluated annually, and modifications are made accordingly. Examples on improvements were cited during interviews, such as the rubrics that were developed and shared with the students to help them in conducting different components of the project; samples of previous students' work were also shared with students to help them in improving their project. Additionally, a key finding identified through the evaluation process of the capstone project is that the capstone project course needs to be expanded over two semesters. During the interviews, the Panel learned that the proposal was submitted for approval.

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.

Judgement: ***Partially Addressed***

- The aspired level of students' achievements is verified through the alignment of PILOs and PEOs to graduate attributes and the alignment of the assessments to CILOs and PILOs. In the more advanced courses, students are assessed on how to create and innovate through using different types of assessment such as cases analysis, graduation project, presentations, innovative projects and campaigns.

- The Panel was provided with the statistics of the BRT programme from 2017 to 2023, which show that around 90 students are admitted into the programme each year with a dropout rate ranging from 7% to 12%. The statistics of the BRT programme also show that 34 students graduated in the academic year 2018-2019, 42 in 2019-2020, 16 in 2020-2021, and 80 in 2021-2023, while it is expected that 103 students will graduate in 2022-2023. As per the Alumni Survey Report of 2020-2021, 46% of the 26 respondents were employed. The Panel is concerned with the low number of respondents and employment rate. Therefore, the Panel recommends that the College should track graduates' destinations and ensure that data collected is utilized to verify that academic standards are met.

- The Alumni Survey Report for 2020-2021 shows a high satisfaction rate with the programme. Around 85% of the respondents agree that they achieved the PEOs. The survey also includes some suggestions on the need for improving the laboratories and facilities as well as increasing the number of faculty, especially for the clinical training supervision (see Indicators 2.2 and 2.3). The Panel examined the Employer Survey of 2023 and noticed that nine employers responded to the survey, from private and governmental hospitals as well as health centers. The results of the survey revealed general employers' satisfaction with the BRT graduates. However, the employers referred to gaps in knowledge in the areas of clinical research and advanced modalities and suggested to develop the curriculum to include radionuclide imaging (nuclear medicine, mammography and breast imaging, radiographic image interpretation). The shortcomings that were identified in the employer and alumni surveys as well as the improvement suggestions are currently under revision by the Department. The Panel recommends that the College should take the necessary actions to address the shortcomings identified in employer and alumni surveys.

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.

Judgement: ***Addressed***

- At the institutional level, policies and regulations are in place such as the Quality Assurance Policy, the Quality Assurance and Enhancement Policy, and the Teaching and Learning Policy, which are appropriate for the needs of the programme. As per the Quality Assurance Policy and the provided evidence all policies are reviewed and updated every five years. Also, there are portals for communicating these policies to all stakeholders (e.g., QAAC webpage) and several printed documents in which the policies are published.

- The QAAC oversees the Quality Assurance (QA) system at the University and the implementation of the QA operational plans. At the college level, there is a Quality Assurance Office and a Quality Assurance Committee. The heads of these entities report to the Dean, who communicates with the Head of the Department (HoD). At the department level, there is also a Quality Assurance Committee that reports to the HoD and oversees all QA activities at the AHD ranging from monitoring courses, teaching and learning, assessments, and surveying stakeholders.

- Academics and support staff are kept updated on all QA related issues through their roles as members in the department Quality Assurance Committee, AHD Council, and BRT programme meetings. Furthermore, faculty members attend the QAAC workshops which update them on QA related academic practices. The Panel was satisfied to see that faculty are participating in various committees and this proves their awareness of QA processes within the programme. During interviews, academic and administrative staff showed an understanding of QA and their role in ensuring the effectiveness of provision.

- As stated in the Quality Assurance Policy and the Quality Assurance and Enhancement Policy, UoB monitors its QA management system through internal and external reviews. However, it was not clear to the Panel how and when the monitoring, evaluation and improvements on QA processes are implemented. Hence, the Panel recommends that the

University should ensure that QA processes and system are regularly evaluated and improved.

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.

Judgement: ***Addressed***

- The CHSS has a suitable organizational structure for managing the programme. The reporting lines as shown in the organizational chart are clear and ensure effective communication and decision making. The HoD oversees the three programmes offered at AHD. Additionally, each programme has a coordinator who reports to the HoD. The academic and administrative responsibilities are distributed among various committees that report to the HoD. There are also clear terms of reference (ToR) for each committee at the College and department level, which are stated in the Committee ToRs document. The document includes committee memberships and their roles and responsibilities.

- The responsibility and custodianship of maintaining the academic standards of the programme are clearly stated at various levels, as per the Quality Assurance Policy. In addition, different councils' responsibilities are presented in the Regulations for Offering and Developing Academic Programmes and Courses document. This helps in identifying where different academic and administrative responsibilities lie, and who exactly is responsible for the custodianship of the academic standards of the programme at the university, college and department levels. This was confirmed by the Panel from interviews with administrative and academic staff. It was also clear from the interviews that the AHD has effective and responsible leadership, and the BRT programme is appropriately managed.

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.

Judgement: ***Partially Addressed***

- UoB has an Annual and Periodic Programme Review Policy that outlines the purpose, scope, principles of reviews and details each type of programme evaluation. In accordance with the Policy, the BRT programme is annually reviewed and evaluated for improvement. The Annual SERs of the programme are based on a range of different data

sources such as: course details; course evaluation results; the feedback received from different committees including PAC and SAC; and survey results. The Panel examined the latest Annual SER for the academic year 2021-2022, which was approved in February 2023, and found that it is comprehensive and includes recommendations for improvement that were included in the action plan for the academic year 2023-3024. The programme monitors the implementation of the improvement plan as evidenced in the provided progress report for the year 2021-2022.

- As per the UoB Annual and Periodic Programme Review Policy, the periodic review of the programmes is conducted every 4-6 years. Evidence was provided on conducting two Internal Audits, one in the academic year 2018-2019, and the other in the academic year 2022-2023. Both are conducted by the University QAAC and resulted in audit reports. The Panel examined both reports and noticed that the focus, scope and purpose of these audit reports are different than what is expected in a periodic review of the programme. Therefore, the Panel recommends that the College should ensure that a comprehensive periodic review of the programme is regularly conducted with its results utilized in improving programme delivery.

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.

Judgement: *Partially Addressed*

- In accordance with the Benchmarking Policy of UoB, the BRT programme went through a benchmarking exercise in the academic year 2019-2020 with similar programmes in three regional universities. The Benchmarking Report covers the programme mission, admission criteria, PILOs, and the study plan. As per the SER, the programme benefitted from the benchmarking exercise in developing the new proposed study plan of 2023. However, given the comments and recommendations of the Panel in Indicators 1.3, 1.4 and 2.3, the Panel recommends that the College should benchmark the programme against similar regional and international programmes as well as the requirements of professional associations. The Panel also recommends that the College should extend the benchmarking scope to include areas such as teaching and learning methods, facilities, and learning resources.

- According to QAAC guidelines, the BRT programme periodically conducts various stakeholders' surveys, which include course evaluations, alumni surveys, student exit surveys, and employer surveys. Samples of course evaluation results and analysis of surveys were provided to the Panel. All survey results along with feedback received from

the PAC and SAC are analysed and compiled in the Annual SER to inform the decisions for future improvements in the programme. Evidence was provided on the modifications introduced to the BRT programme based on the feedback of various stakeholders.

- Internal stakeholders, faculty and administrative staff confirmed during interviews that they receive updates either from the HoD or through meeting minutes. In addition, PAC members are informed of changes during PAC meetings. Overall, the analysis of various surveys demonstrates a high satisfaction rate with the BRT programme.

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.

Judgement: ***Addressed***

- The BRT programme has a functioning Advisory Board that consists of PAC and SAC. Both PAC and SAC have clear ToRs. The PAC comprises members from the government and private sectors, as well as alumni. The Panel was provided with a sample of meeting minutes of the PAC, including one dated 26 September 2019 and another one dated 5 September 2022. A report on the meeting of the SAC members of all programmes offered by CHSS with the Dean dated 20 December 2018 and an improvement plan based on this meeting were also provided to the Panel. Both PAC and SAC members attend a joint meeting once every year. The meeting minutes of their second joint meeting of 13 March 2023 was provided as evidence. As evident in the PAC meeting minutes, feedback is sought from the PAC to improve the curriculum and the study plan. For instance, the proposed study plan of 2023 incorporates several suggestions from the PAC, including moving the forensic radiology course to the elective courses and adding the computed tomography to the core courses.

- The mechanisms that are in place to collect data about the quality of the programme and whether graduates meet labour market needs are mainly satisfaction surveys and feedback from PAC. To ensure that the programme is relevant and up to date, a Market Study was conducted in March 2021. The outcomes of PAC and SAC meetings, various surveys, and the market study analyses are integrated into the the BRT Annual SERs. This is followed by setting up improvement plans, that are monitored by the QA team at the CHSS. The Panel is satisfied with the current arrangements.

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 in Radiologic Technology (Diagnostic) of College of Health and Sport Sciences offered by the University of Bahrain.

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

1. The arrangements in place for faculty development are consistently implemented, monitored and evaluated.
2. The efforts exerted by the College and the Business Incubator Center at UoB on career guidance of students and on employing students at the University are notable.

In terms of improvement, the Panel recommends that the University of Bahrain and the College of Health and Sport Sciences should:

1. Continuously monitor potential risks and implement an urgent action plan to address these risks in order to ensure the programme's resilience and effectiveness in addressing emerging challenges.
2. Review the curriculum of the programme and benchmark it with standards of international professional associations to ensure that the programme is relevant to recent updates in the field and caters for the market needs.
3. Ensure that the practical element is clearly defined in all related courses.
4. Review all course syllabi to ensure its adequacy in terms of depth and breadth, clarity, and relevance of their content.
5. Employ a variety of teaching and learning methods as well as a range of pedagogical approaches, such as image session, simulations, and projects, alongside a detailed explanation of their implementation to support the delivery of the programme.
6. Set an urgent action plan to provide the faculty with necessary facilities and funds as well as reducing their workload to increase their research productivity.
7. Recruit additional senior faculty members in different specializations with clinical experience to supervise students' clinical practice.

8. Enhance the programme facilities including classrooms, laboratories, equipment, and learning spaces, to foster a more conducive learning environment and cater for the increasing number of students.
9. Establish a simulation laboratory with advanced imaging modalities and software.
10. Ensure updating all signages at the college premises as well as the health and safety provisions.
11. Set up a clear percentage for the acceptable similarity, and a cap for the permitted times of resubmissions.
12. Develop and implement a mechanism for the evaluation of the moderation process effectiveness at the programme level.
13. Reduce the size of students in training groups and expand its partnerships with advanced imaging centers.
14. Develop a mechanism to monitor students' satisfaction with the supervision process and the resources available to carry out their graduation project.
15. Track graduates' destinations and ensure that data collected are utilized to verify that academic standards are met.
16. Take the necessary actions to address the shortcomings identified in employer and alumni surveys.
17. Ensure that quality assurance processes and system are regularly evaluated and improved.
18. Ensure that a comprehensive periodic review of the programme is regularly conducted with its results utilized in improving programme delivery.
19. Benchmark the programme against similar regional and international programmes as well as the requirements of professional associations.
20. Extend the benchmarking scope to include areas such as teaching and learning methods, facilities, and learning resources.