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للمؤهلات وضمان جودة التعليم والتدريب
National Authority for Qualifications &
Quality Assurance of Education & Training



Directorate of Higher Education Reviews Programme Follow-up Visit Report

**Bachelor of Science in Information Technology
College of Information Technology
Royal University for Women
Kingdom of Bahrain**

First Follow-up Visit Date: 20-21 December 2015

Review Date: 5-8 May 2013

HC071-C2-F003

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The Programme Follow-up Visit Overview

The follow-up visit for academic programmes conducted by the Directorate of Higher Education Reviews (DHR) of the National Authority for Qualifications & Quality Assurance of Education & Training (QQA) in the Kingdom of Bahrain is part of a cycle of continuing quality assurance review, reporting and improvement.

The follow-up visit applies to all programmes that have been reviewed using the Programmes-within-College Reviews Framework, and received a judgement of 'limited confidence' or 'no confidence'.

This follow-up visit Report is a key component of this programme review follow-up process, whereby the Bachelor of Science in Information Technology (BSIT), at Royal University for Women (RUW) in the Kingdom of Bahrain was revisited on 20-21 December 2015 to assess its progress, in line with the published review Framework and the QQA regulations.

The subsequent sections of this Report have been compiled as part of Phase 2 of the DHR/QQA's programme follow-up cycle highlighted in the DHR Programme Review Handbook, and associated with the on-going process of institutional and academic reviews of Higher Education Institutions located in the Kingdom of Bahrain.

A. Aims of the Follow-up Visit

- (i) Assess the progress made against the recommendations highlighted in the review report (in accordance with the four QQA Indicators) of RUW's BSIT since the programme was reviewed on 5-8 May 2013.
- (ii) Provide further information and support for the continuous improvement of academic standards and quality enhancement of higher education provision, specifically within the BSIT programme at RUW, and for higher education provision within the Kingdom of Bahrain, as a whole.

B. Background

The programme review of the BSIT, at RUW in the Kingdom of Bahrain was conducted by the DHR of the QQA on 5-8 May 2013.

The overall judgement of the review panel for the BSIT programme, of RUW was that of 'no confidence'. Consequently, the follow-up process incorporated the review of the evidence presented by RUW to the DHR, the improvement plan, the progress report and its supporting materials, and the documents submitted during the follow-up site visit and those extracted from the interview sessions.

The external review panel's judgement on the RUW's BSIT programme for each Indicator was as follows:

Indicator 1: The learning programme; '**not satisfied**'

Indicator 2: Efficiency of the programme; '**satisfied**'

Indicator 3: Academic standards of the graduates; '**not satisfied**'

Indicator 4: Effectiveness of quality management and assurance '**not satisfied**'

The follow-up visit was conducted by a Panel consisting of two members. This follow-up visit focused on assessing how the institution addressed the recommendations of the report of the review conducted on 5-8 May 2013. For each recommendation given under the four Indicators, the Panel judged whether the recommendation is 'fully addressed', 'partially addressed', or 'not addressed' using the rubric in Appendix 1. An overall judgement of 'good progress', 'adequate progress' or 'inadequate progress' is given based on the rubric provided in Appendix 2.

C. Overview of the Bachelor of Science in Information Technology

The Bachelor of Science in Information Technology programme is offered by the College of Information Technology and was the only programme on offer at the time of this follow-up visit. The programme is managed by the Dean of the College who report to the Vice President for Academics (VP Academics). The programme was revised and the total number of credits were increased to 132, which includes 21 credits for liberal art courses, 78 credits for college requirement courses and 33 credits for major requirements courses. At the time of the visit the total number of students enrolled in the College was 13 and the programme was delivered by three specialized full-time faculty members, in addition to faculty members from the liberal art and part-time teaching staff who contribute to the delivery of the programme as needed.

1. Indicator 1: The Learning Programme

This section evaluates the extent to which the BSIT programme of RUW, has addressed the recommendations outlined in the programme review report of May 2013, under Indicator 1: The learning programme; and as a consequence provides a judgment regarding the level of implementation of each recommendation for this Indicator as outlined in Appendix 1 of this Report.

Recommendation 1.1: *review and revise the aims of the programme*

Judgement: *Partially Addressed*

The College of Information Technology (CIT) submitted an updated programme specification document, effective July 2015. The aims of the revised programme were reduced from nine to four and these new aims were reviewed by external reviewers to validate its applicability to the programme. An action plan was developed to address the comments and feedback of the external reviewers with a defined timeline. The Panel studied the revised programme aims and found that the major changes introduced have improved the alignment of the aims to the college mission statement. A similar alignment is made for RUW's strategic goals and the university mission. However, the Panel is concerned that the programme aims are not technology oriented to reflect the programme nature. Similar concerns were raised by one of the external reviewers. During interviews with faculty, the Panel learned that the College is aware of this shortcoming and is working to address this issue. Moreover, the programme aims are not reflecting excelling and empowering women in the field of IT as it is clearly emphasized in the college mission. During the site visit, senior management indicated that this will be considered in future reviews to help achieving the college vision to 'foster women's excellence and attraction to technology related fields'. The Panel also noted the absence of emphasize on research development strategic goals within the programme aims. However, senior management stated that research development is still pre-mature and research centre is inactive currently, yet the University is working on the research strategic plan. The Panel recommends that in its next periodic review of the programme, the CIT revisit the programme aims to address the abovementioned issues.

Recommendation 1.2: *expedite the review and revision of the curriculum ensuring greater coherence, progression in skills development and focus on practice*

Judgement: *Partially Addressed*

The flow of the course Intended Learning Outcomes (ILOs) in the revised BSIT programme is appropriate and well organized for students' progress across the semesters. During the site visit, the Panel scrutinized the course files and found that

courses reflect progression in the traditional sense of a steady rise in the complexity of disciplinary knowledge and the enhancements of their skills. Students are initially introduced to the IT environment and the theoretical underpinnings the knowledge and skills they may or may not already have acquired during their high school studies as admitted students are accepted from different streams. (Introduction to IT, Programming I, Discrete Mathematics). The revised curriculum then builds upon these fundamental courses and introduces a set of intermediate courses to open students' way for possible adaptations and enrichment of their thinking to be reflected in their future practice (Management Information Systems, Network Computing I, Database Management Systems I, Software Engineering I, Operating Systems, Computer programming I, Data Structures, Internet and Web Technology). Furthermore, the programme progresses to advanced courses with advanced learning outcomes that address higher levels of Bloom's Taxonomy and is guided by the needs of students, international professional guidelines (ACM/IEEE and ABET) and the needs of the wider community. These advance courses include Web Programming, Software Engineering II, Network Computing II, IT Strategy, Information System Management, IT System Administration, Database Management II, Computer Security, Human Computer Interactions, Enterprise Systems, IT Project Management. However, the Panel has some concerns with a few pre-requisites that were set without providing appropriate justifications. For example, there is no proper justification of why Operating System (CS340) and Software Engineering I (CS345) are pre-requisites for IT Strategy (IT470), Network Computing I (IT325) is a pre-requisite for E-Business (IT380), Software Engineering I (CS345) is a pre-requisite for IT Project Management (IT405). During interview sessions, faculty members explained that these pre-requests are introduced to develop students' general knowledge and ensure their general maturity before moving to advance level courses. However, the Panel is of the view that this might create unnecessary barriers to progress through courses.

The Panel appreciates the efforts to revise the BSIT programme and develop the course specification for all courses, even those that are not delivered yet. The Panel noted that the practical parts of the courses are enhanced, in particular for courses of practical nature such as programming languages, network computing, and databases courses as evident from the course files. Students have confirmed that the revised programme and courses increased the focus on practical parts to further develop their skills. They expressed their satisfaction with the increase in the practical sessions, which improved their skills-based learning outcomes. Notwithstanding the above, the Panel noted that courses that normally require physical laboratories, such as physics and networking, have been enriched with simulation experiments. The Panel is of the view that scientific methods are a vital component to develop logical thinking skills within the field of computing and science in general. Therefore, students must have direct hands-on experience with real exposure to laboratory work. The Panel recommends that the

College enrich the students' experience with real laboratory experience and exposure to scientific methods in addition to the simulation tools.

To develop students' practical skills further, the revised programme has introduced a new course (IT280) that develops students' professional skills. Moreover, there is evidence that the curriculum is enriched with multiple industrial visits to expose students to more advanced aspects of information technology and professional and ethical aspects as well. Furthermore, there is evidence that faculty encourage students to acquire professional certifications (such as CCNA in Network Computing I). This would enhance students' employability and the Panel encourages the College to formalise the process.

Recommendation 1.3: *expedite the redesign of the IT curriculum ensuring weaknesses in coverage breadth and depth are addressed through alignment with suitable international benchmarks and norms*

Judgement: *Fully Addressed*

The College revised the curriculum in the academic year 2012-2013 and modified it to include 'Human Rights' course as new Higher Education Council's (HEC) requirement to all academic programmes offered in Bahrain. Moreover, the findings of the informal benchmarking as well as the last review report recommendations and the Faculty Advisory Committee (FAC) recommendations have been utilized to strengthen the syllabus breadth and depth. The Panel found evidence of the BSIT programme alignment to ABET and ACM/IEEE guidelines as well. During interviews with faculty, the Panel was informed that the revised BSIT programme is designed based on the aforementioned guidelines to align the programme with international standards, in preparation for ABET accreditation. During the site visit, the Panel studied course files and found adequate coverage (both depth and breadth) of main areas meeting norms and standards of the discipline and the awarded qualification and the basic sciences needed. For the Networking Components there are two courses, the first is an introductory course that covers fundamental knowledge and skills related to network computing including basic network security and configuration. The second course provides students with deeper understanding of computer networking systems and routing protocols. Similar coverage were addressed for the programming and database components as well. The Panel found that the changes made to address the depth and breadth of the curriculum and its syllabus is adequate. Interviewed students indicated that the revised curriculum enhanced the coverage depth and breadth in the curriculum and the relevant set of skills that are gained. However, provided evidence shows that there are limited elective courses that can enhance students' employability and increase their opportunities after graduation. The students have raised similar concerns and highlighted the need to offer more options

such as topics in mobile computing. The Panel suggests that the College review and enrich the programme elective list offered to students.

Recommendation 1.4: *revise the programme ILOs ensuring a succinct and coherent set of relevant skills*

Judgement: *Fully Addressed*

The College revised the programme ILOs of the BSIT programme based on ABET guidelines and aligned it to the programme aims. The Panel found the level of these ILOs are appropriate to the type and level of the programme. They cover Knowledge and Understanding (A), Subject-specific Skills (B), Critical Thinking Skills (C) and General and Transferable Skills (D). Each is sub-divided into more detailed sub-categories. Interviewed faculty members were aware of the skills and competencies the BSIT programme seeks to develop and the importance of demonstrating achievement of the programme ILOs. Students indicated that they are aware of the programme ILOs since these are included in the syllabus of each course and the lecturers discuss them during the first week of each semester. Moreover, external reviewers have highlighted the improvements in the programme ILOs and their alignment to programme aims.

Recommendation 1.5: *revise the Course ILOs and the mapping of the courses to the programme ILOs*

Judgement: *Partially Addressed*

The College revised the ILOs of all courses and included them in the revised programme and course specification. During the site visit, the Panel noted that course ILOs are clearly and consistently defined and described for all courses and also are appropriately mapped to the programme ILOs at two levels, the course itself and the individual course ILO. Moreover, the course ILOs are mapped to the assessment tools used to demonstrate the extent to which students have achieved a specific learning outcome. In interviews with faculty members, the Panel noted the faculty members' awareness to the extent a course and its outcomes are contributing to the achievement of the programme ILOs. They explained how the course ILOs are set to be appropriate to the type and level of the course and its content. The Panel appreciates the role of the Teaching & Learning Committee in revising and monitoring the quality of the course ILOs and their mapping to the programme outcomes. Nonetheless, through reviewing the course specification, the Panel noted that the listed course ILOs of a few introductory courses have learning outcomes that are often delivered by advanced courses, and require richer contents and more challenging assessment tools, which are not provided by these introductory courses. For example, in 'CS200 – Programming II' the students are required to apply programming in real case scenarios, yet this is not

evident in the course's assessments within the course files. Similar cases were found in courses like 'CS160', 'CS180', and 'IT200'. The Panel recommends that the College, in its next periodic review of the programme, revise the ILOs for these courses and modify the mapping matrix according to the changes.

Recommendation 1.6: expedite the review of the internship

Judgement: Partially Addressed

The College developed the course specification for the internship with clearly stated ILOs that are linked properly to the programme ILOs where students are expected to attend on-job training for actual 120 hours. The roles and responsibilities of the students, supervisors and academic advisors are also clearly defined. There are guidelines and rubrics assessment and grading that are communicated to the site supervisor and its implementation is evident in the course file. Both the site supervisor and the academic advisor from RUW evaluate the students. In interviews with site supervisors, the Panel confirmed that monitoring and assessments mechanism of internship students are implemented consistently. However, the site supervisors indicated that 120 working hours is not sufficient to fully achieve the intended outcomes. In interviews with faculty, the Panel learned that the College is aware of this and is in the processes of increasing the total working hours to 200. Furthermore, the Panel noted that students are requested to finish 50% of the total credit hours of the programme in order to be eligible to register in the course. The Panel is concerned that this is not sufficient to ensure that students have acquired the knowledge and skills needed to achieve the ILOs stated in the course specification. In particular for learning outcomes that require applying of advanced knowledge and skills. This concern was confirmed during interviews with students. Whilst, interviewed faculty members indicated that they encourage students to take it later, the Panel recommends that the College revise minimum credit requirement to ensure the full achievement of the learning outcomes of the internship. Moreover, the Panel noted that the academic advisor does not visit the students during the training period, although they monitor student performance through weekly reports. The Panel recommends that the College improve this mechanism and include a visit to the students on site to ensure applicability of given tasks and working environment to achieve the required learning outcomes.

Recommendation 1.7: *revise the course specification according to the assessment policy ensuring alignment between assessment instrument and ILOs*

Judgement: *Fully Addressed*

The Panel studied the course files and notes that course specifications are revised and fully developed, even for courses that are not yet delivered. The revised course specifications include specifying assessment instruments, and grade distribution and that these are in line with revised assessment policy. The Panel learned that course specifications are revised by the College and approved by the Dean before sending them to the Teaching & Learning Committee for final revision and approval. During interview sessions, the Panel was informed that no changes to the distribution of grades are performed without the Committee's approval. The Panel appreciates the active role of the Committee in ensuring consistency of course specifications and assessment tools. Moreover, the Panel studied the mechanism in place to align specific assessments to ILOs and noticed the consistency across all courses including non-IT courses. The alignment between assessments and ILOs is performed by course instructors followed by a revision by the Faculty Council and the Dean's approval. The revised assessment policy also stipulates a moderation and verification policy that include both internal and external moderation to ensure that implemented assessments are aligned properly to the course ILOs.

2. Indicator 2: Efficiency of the Programme

This section evaluates the extent to which the BSIT programme of RUW, has addressed the recommendations outlined in the programme review report of May 2013, under Indicator 2: Efficiency of the programme; and as a consequence provides a judgment regarding the level of implementation of each recommendation for this Indicator as outlined in Appendix 1 of this Report.

Recommendation 2.1: *Develop and implement a comprehensive faculty plan that ensures a sufficient number of academic staff are employed*

Judgement: *Partially Addressed*

There is a five-year plan indicating the number of faculty to join the College. The Plan is based on the estimated number of students expected to enrol in the programme and it is left to the College to decide the specialization needed. Currently the programme is delivered by three full-time faculty members (2 PhD (Assistant professors); 1 Master degree with different backgrounds in MIS, IT and CS). Part-time teaching staff are also recruited occasionally to teach specialized courses. The Panel studied the provided CVs and teaching load distribution and notes that the faculty members (including the Dean) teach the maximum teaching load allowed by the HEC and that they have tendency to teach outside their specialization to compensate for the lack of specialized faculty members. During interview sessions, the Panel was informed that the College has identified the need to recruit a teaching staff in IT with preferable background in data mining and networking and had managed to employ a senior faculty member with the needed specialization. Nonetheless, the Panel was informed that he had to leave the post due to a personal situation. The University is currently in the last stages of hiring another faculty member, awaiting the final approval of the HEC.

Recommendation 2.2: *expedite the implementation of the recruitment, appraisal and promotion policies that includes a retention policy resulting from the investigation as to the reasons for high staff turnover.*

Judgement: *Fully Addressed*

The institution has clear recruitment, appraisal and promotion policies pertaining to academic staff. The revised policies clearly specify the roles and responsibilities of different parties within defined processes. Interviewed academic and administrative staff showed clear understanding of the policies and their specific roles within the processes. The institution has conducted an investigation to study the reasons for the high staff turnover around the time of the previous review. However, the study revealed no specific reasons. Moreover, the Panel was provided with statistics on the retention rate of academic staff within the College for the last three academic years, which ranged between 75% to 100%. During interview sessions the Panel was

informed that faculty members leaving the institution are requested to fill a feedback form with the HR Department where the reasons for leaving the institution are explained and then discussed with the university President. Interviewed staff members indicated their satisfaction with the working environment in the institution.

Recommendation 2.3: review the staff orientation policy to include part-time staff

Judgement: Fully Addressed

The University implements an orientation programme for all staff members where new staff members are introduced to the university's roles and regulations and old staff members are informed about any updates introduced in relation to the institution as a whole and to the programme in particular. During interview sessions the Panel confirmed that part-time staff members are informed in advance about these orientation sessions and that they are invited to attend these. The Panel was informed that if a part-time teaching staff is not able to attend these sessions they get the information needed through personal meetings with the Dean and the Staff Orientation Handbook. Part-time teaching staff are also provided with course specifications and relevant policies, such as teaching and learning and assessment policies in advance to enable them to prepare their courses. The Panel notes that the interviewed part-time teaching staff are well-informed about the policies and procedures of RUW. Throughout the duration of the course, the Panel was informed, part-time staff members are in continuous contact with the Dean and faculty members. They are also invited to attend some College Council meetings, which they attend if their time allows. The Panel studied the course files of some of the part-time teaching staff and notes that these are in line with the university's policies and procedures.

Recommendation 2.4: integrate and use the reporting capabilities of its systems to enable more informed decision making

Judgement: Partially Addressed

The institution utilises the Management Information System 'PowerCampus', which provides detailed information to staff and students with different access levels. Teaching staff utilise the 'PowerCampus' to monitor students' attendance and performance. The system posts forecasted grades enabling both teaching staff and academic advisors to be proactive in identifying and dealing with 'at-risk' students. During the site visit the Panel attended a demo of the 'PowerCampus' through which the Panel confirmed these features and that course files uploaded to the system are up-to-date. The registrar office provides the Dean with reports on students' attendance in different courses. Part-time staff members also have access to the 'PowerCampus' and are provided with the training needed to utilise the system. Whilst the Panel is satisfied

with the level of utilization of the system on a course level and on individual student level, the Panel recommends that the College benefit from the full capabilities of the system and conduct more detailed statistical analysis on cohort levels to inform high-level decision-making.

Recommendation 2.5: Develop and implement a disaster recovery plan and off-site backup policy for mission-critical data

Judgement: *Fully Addressed*

RUW developed a formal disaster recovery plan that is fully implemented. During interview sessions, the Panel was informed that the University utilises two sites to store a backup of all its data; one of which is on sites with a replicate of the main hardware and a daily backup of the data, while the second is through renting space in the cloud where weekly and monthly data backup is performed.

3. Indicator 3: Academic standards of the graduates

This section evaluates the extent to which the BSIT programme of RUW, has addressed the recommendations outlined in the programme review report of May 2013, under Indicator 3: Academic standards of the graduates; and as a consequence provides a judgment regarding the level of implementation of each recommendation for this Indicator as outlined in Appendix 1 of this Report.

Recommendation 3.1: *Align the aims and ILOs to the graduate attributes.*

Judgement: *Fully Addressed*

The BSIT programme's aims and ILOs are aligned to the graduate attributes. During the site visit, the Panel studied the graduate attributes and found that programme ILOs enable the achievement of the graduate attributes as outlined in the BSIT Programme specification. After scrutinizing the course files, the Panel found that the assessment methods are linked to the course ILOs, which are mapped to the programme ILOs and hence collectively assess the achievement of the graduate attributes.

Recommendation 3.2: *align the teaching and learning and assessment methods with programme ILOs.*

Judgement: *Fully Addressed*

The revised programme specification includes the programme ILOs and the teaching and learning and assessment methods used for each domain, which covers Knowledge and Understanding (A), Subject-specific Skills (B), Critical Thinking Skills (C) and General and Transferable Skills (D). Moreover, this is detailed at a course level for every individual course within the curriculum including the support and general study courses. The revised course specifications include the alignment of the teaching and learning methods and the proposed assessment methods to the course ILOs. During the site visit, the Panel learned that the Teaching & Learning Committee reviews the course specification before approving the changes. This mechanism in place to revise the course specification is effective and efficient and resulted in improvements of some courses as reported during the interviews and evident in course files.

Recommendation 3.3: undertake formal external benchmarking in order to align the IT programme with regional and international standards

Judgement: *Partially Addressed*

The College has conducted an informal benchmarking exercise with four institutions. These institutions are the University of Bahrain, Kingdom of Bahrain, King Saud University, Kingdom of Saudi Arabia, West Virginia University, United States of America, Putra University, Malaysia. The purpose of this informal benchmarking was to compare the BSIT curriculum with similar curriculums offered locally, regionally and internationally, and identify areas for improvement. The scope of the informal benchmarking exercise focused mainly on areas related to credit hours, and volume of study. Moreover, CIT conducted another informal benchmarking exercise with professional bodies' guidelines (such as ABET and ACM/IEEE) to align the curriculum to international standards. In addition, the revised BSIT programme was sent to external reviewers in Malaysia and Bahrain to obtain their feedback on the improvements introduced to the programme. The Panel found an action plan and evidence of some implementation of the changes that were suggested by external reviewers. During interview sessions, the Panel was also informed that the University is at the final stages of signing a memorandum of understanding with another regional all women private institution. The Panel recommends that the College expedite the implementation of formal benchmarking and expand its activities to include the graduates' achievement and university resources.

Recommendation 3.4: Develop and implement a formal policy for external benchmarking

Judgement: *Partially Addressed*

RUW has developed and approved a formal benchmarking policy that defines the purpose and procedures for formal benchmarking. The policy identifies the areas covered during the benchmarking process. Moreover, the policy defines the flow of information, the procedures adopted and the expected outcomes from the benchmarking process. During interviews, the Panel learned that there are attempts to formalise this process as CIT identified the institutions for the formal benchmarking exercise. As stated earlier, RUW is in the process of formalising its relationship with these institutions through signing memorandum of understandings. The Panel recommends that the College expedite the implementation of the formal benchmarking policy.

Recommendation 3.5: *Expedite applications of changes of assessment policies and grading systems and effectively monitor them*

Judgement: *Fully Addressed*

RUW has revised the assessment policy. The Panel was informed during the site visit about the changes introduced in the revised policy. The institution introduced feedback mechanism that ensures students are guided properly on how to improve their performance. The policy stipulates a well-defined internal moderation mechanism that is consistently implemented for all written examinations including non-IT examinations. Moreover, the revised policy introduced verification process to post-moderate assessments, and external examiners for the senior project as a process to ensure that the level and type of assessment tools used are appropriate for the BSIT programme. During the site visit, the Panel learned that monitoring is performed at a number of levels. After preparation of assessments, the Faculty Council revise these and suggests necessary modifications before approval by the Dean. The assessments then are revised by the Teaching & Learning Committee to ensure that these are at an appropriate levels. Moreover, during interview sessions it was evident that part-time staff are aware of this policy.

Recommendation 3.6: *expedite the plan to develop and implement a well-defined mechanism for internal moderation of assessment and grading*

Judgement: *Partially Addressed*

There is a well-defined internal moderation process initiated by the CIT, which was later adopted by the Quality Assurance & Enhancement Committee, revised and disseminated to all colleges. The Panel appreciates the active continues enhancement approach within the CIT to improve their programmes. There is evidence in the course files of improvements introduced to courses as a result of the internal moderation process. However, the internal moderation is implemented for the written examinations only, and needs to be expanded to include all types of assessment instruments.

Recommendation 3.7: *review and revise its approach to the setting of assessment, Quality Assurance of such assessment ensuring that the assessment in practice are of the appropriate level to meet international standards*

Judgement: *Fully Addressed*

Course specifications include assessment types and their alignment to the course ILOs. Once lecturers set the examination papers, then the internal moderator reviews all questions and ensures that these are suitable for assessing the level of achievement of

the desired course ILOs and are appropriate for the level and type of the course, before approval by the Dean. After setting the examination, at least 30% of graded examination papers are reviewed by external verifiers and feedback is collected and used to improve assessment. Moreover, external examiners conduct post-moderation for all the assessment tools used. There is evidence from course files that feedback is utilised and was confirmed by the interviewed external verifiers. This resulted in improvements in courses such as network computing and database courses, and the senior projects. During interview sessions, the Panel was informed that the Teaching & Learning Committee also monitors the appropriateness of the assessment tools used to the type and level of the course and its ILOs. Moreover, courses that are delivered by part-time faculty are also included in this cycle and part-time faculty are aware of this process. The Panel finds these arrangements in place are adequate and consistent to ensure appropriateness of assessments.

Recommendation 3.8: *Revise its approach to the setting and supervision of graduation projects ensuring that students are able to meet international standards appropriate to a qualification at a Bachelor level.*

Judgement: *Fully Addressed*

During the site visit, the Panel reviewed a set of graduation projects for the BSIT programme and relevant supervisors' files. The Panel noticed improvement in the level of projects delivered by students. There are projects that tackle a variety of problems from different areas of Information Technology such as e-Voting, Enterprise systems for RUW, and advanced mobile applications. Moreover, reports are well written and organized professionally and appropriate for a senior project level of a bachelor in IT programme. The Panel appreciates the College initiative to engage external examiners to evaluate the senior projects and notes that the feedback received from external examiners is effectively used to improve the final product of students' projects.

Recommendation 3.9: *revise its graduate exit survey, addressing programme content, delivery and management*

Judgement: *Fully Addressed*

RUW developed a surveys policy on 2014 that ensures all surveys contribute holistically to collecting feedback on the programme performance and are reviewed every three years at a minimum. During the site visit, the Panel studied the revised exit survey and noticed the changes made to the survey to improve its contents. The revised survey includes items on programme content, the delivery mechanism of the programme and the programme support services as well as the programme management. In the academic year 2013-2014, the CIT applied the revised exit survey,

analysed and discussed the obtained results in the Faculty Council. The results show an acceptable level of satisfaction with regards to the BSIT programme. However, the low number of graduates influences the statistical weight of these outcomes.

4. Indicator 4: Effectiveness of quality management and assurance

This section evaluates the extent to which the BSIT programme of RUW, has addressed the recommendations outlined in the programme review report of May 2013, under Indicator 4: Effectiveness of quality management and assurance; and as a consequence provides a judgment regarding the level of implementation of each recommendation for this Indicator as outlined in Appendix 1 of this Report.

Recommendation 4.1: ensure effective leadership of the faculty of IT by the appointment of a well-experienced senior academic staff

Judgement: *Partially Addressed*

The Panel was provided with evidence of the College identifying and seeking to recruit well-experienced senior academic staff who is specialised in IT. As a result, the College recruited a senior staff. However, he quit his post after a short period due to personal reasons. The College is currently in the final stages of recruiting a senior academic staff once the University receives the HEC approval. Meanwhile, the institution is actively providing current faculty members with capacity building opportunities, and the Teaching & Learning Committee is playing a major role in providing the College with the effective leadership needed.

Recommendation 4.2: *Develop and implement a policy assists in the establishment of a quality culture so that academic staff including part-time staff are aware of their role and responsibilities*

Judgement: *Fully Addressed*

RUW has developed a clear Quality Assurance framework that stipulates the different roles and responsibilities. While the Quality Assurance & Enhancement Committee is responsible for setting the needed policies and procedures related to quality assurance within the Faculties, in collaboration with the Teaching & Learning Committee, it is the role of the Quality Assurance Unit (QAU), VP academics and the Dean to ensure the consistent implementation of these policies within the programme and its delivery. Interview sessions revealed that there is a shared understanding amongst faculty members, including part-time staff members about their roles and responsibilities. Faculty members indicated that while the QAU would monitor and audit the College's activities on an annual basis, they were responsible for the programme development and the quality of its delivery.

Recommendation 4.3: *Develop and implement a policy for the design, development and implementation of a new programme of study*

Judgement: *Fully Addressed*

A policy on programme approval and modification was developed and approved in February 2014. The policy formalises a clear mechanism for the design, development and implementation of a new programme. New programmes are initiated by the College and must include market need analysis. Once a comprehensive proposal is developed, it is sent to the Dean's Council and the relevant Senate Standing Committees for approval, after which the proposal is recommended to the University Senate for final approval and the Board of Trustees for endorsement. Finally, the proposal is sent to the HEC for licencing. Nonetheless, the College did not propose any new programme since the last review.

Recommendation 4.4: *Establish formal quality processes addressing programme improvement, based on a range of assessment instruments, including course folders*

Judgement: *Partially Addressed*

The Quality Assurance Framework stipulates the range of evaluation used to ensure and enhance the quality of the programme and its delivery. The Framework identifies the different stakeholders from which feedback is collected and utilised to improve the programme. Moreover, RUW has recently developed and approved an Academic Audit Policy according to which samples of the programme course files are subjected to an internal audit conducted by representatives from the QAU and assigned faculty members. Based on clear criteria, auditors assess the content of the course files, the quality of the course ILOs and their mapping to the programme learning outcomes and the range of assessment tools used and their appropriateness to the course content and its ILOs. Formal feedback is provided and the Panel was provided with evidence of improvement plans with clear targets and time lines, being developed and implemented. Nonetheless, it is not clear how the different inputs will feed collaboratively to the programme improvement as a whole. Moreover, it is not clear how this continuous maintenance of the programme will feed into the programme periodic reviews. The Panel recommends that the College develop and implement clear mechanisms for the continuous maintenance and periodic reviews of the programme and define how the former would feed into the latter.

Recommendation 4.5: *Continue the work on scoping the labour market which will inform course and new programme development*

Judgement: *Not Addressed*

During the previous programme review, the College stated that it is in the process of conducting formal study to scope the labour market and inform the development of the programme and its courses. However, during this site visit, the Panel was informed that the College did not conduct any formal study of the labour market needs since the last review and that the feedback received from the advisory committee and the employer is sufficient. However, the Panel is of the view that the College needs to conduct a formal study of the market needs that includes the different labour market spectrum to assess the need of the market for such programme, especially with the low numbers of enrolled students.

5. Conclusion

Taking into account the institution's own progress report, the evidence gathered from the interviews and documentation made available during the follow-up visit, the Panel draws the following conclusion in accordance with the DHR/QQA Follow-up Visits of Academic Programme Reviews Procedure:

The Bachelor of Science in Information Technology programme offered by the Royal University for Women has made 'adequate progress' and as a result, no further follow-up visit is required.

Appendix 1: Judgement per recommendation.

Judgement	Standard
Fully Addressed	The institution has demonstrated marked progress in addressing the recommendation. The actions taken by the programme team have led to significant improvements in the identified aspect and, as a consequence, in meeting the Indicator's requirements.
Partially Addressed	The institution has taken positive actions to address the recommendation. There is evidence that these actions have produced improvements and that these improvements are sustainable. The actions taken are having a positive, yet limited impact on the ability of the programme to meet the Indicator's requirements.
Not Addressed	The institution has not taken appropriate actions to address the recommendation and/or actions taken have little or no impact on the quality of the programme delivery and the academic standards. Weaknesses persist in relation to this recommendation.

Appendix 2: Overall Judgement.

Overall Judgement	Standard
Good progress	The institution has fully addressed the majority of the recommendations contained in the review report, and/or previous follow-up report, these include recommendations that have most impact on the quality of the programme, its delivery and academic standards. The remaining recommendations are partially addressed. No further follow-up visit is required.
Adequate progress	The institution has at least partially addressed most of the recommendations contained in the review report and/or previous follow-up report, including those that have major impact on the quality of the programme, its delivery and academic standards. There is a number of recommendations that have been fully addressed and there is evidence that the institution can maintain the progress achieved. No further follow-up visit is required.
Inadequate progress	The institution has made little or no progress in addressing a significant number of the recommendations contained in the review report and/or previous follow-up report, especially those that have main impact on the quality of the programme, its delivery and academic standards. For first follow-up visits, a second follow-up visit is required,