

الهيئة الوطنية
للمؤهلات وصنمان جودة التعليم والتدريب
National Authority for Qualifications &
Quality Assurance of Education & Training



Directorate of Higher Education Reviews

Programmes-within-College Reviews Report

**Master in Information Technology and Computer
Science**

College of Information Technology

Ahlia University

Kingdom of Bahrain

Date Reviewed: 6–9 October 2013

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Acronyms

ACID	Ahlia Center for Information and Documentation
ATDC	Ahlia Training and Development Center
AU	Ahlia University
BSDSM	Bachelor in Distributed Systems and Multimedia
BSIT	Bachelor in Information Technology
CAQA	Centre for Accreditation and Quality Assurance
CME	Center for Measurement and Evaluation
DHR	Directorate of Higher Education Reviews
HEC	Higher Education Council - Kingdom of Bahrain
ILO	Intended Learning Outcome
MIPRC	Master Internal Programme Review Committee
MITCS	Master in Information Technology and Computer Science
QQA	National Authority for Qualifications & Quality Assurance of Education & Training
SER	Self-Evaluation Report
TLC	Teaching and Learning Committee

1. The Programmes-within-College Reviews Process

1.1 The Programmes-within-College Reviews Framework

To meet the need to have a robust external quality assurance system in the Kingdom of Bahrain, the Directorate of Higher Education Reviews (DHR) of the National Authority for Qualifications & Quality Assurance of Education & Training (QQA) has developed and is implementing two external quality review processes, namely: Institutional Reviews and Programmes-within-College Reviews which together will give confidence in Bahrain's higher education system nationally, regionally and internationally.

Programmes-within-College Reviews have three main objectives:

- To provide decision-makers (in the higher education institutions, the QQA, the Higher Education Council (HEC), students and their families, prospective employers of graduates and other stakeholders) with evidence-based judgements on the quality of learning programmes
- To support the development of internal quality assurance processes with information on emerging good practices and challenges, evaluative comments and continuing improvement
- To enhance the reputation of Bahrain's higher education regionally and internationally.

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

Indicator 1: The Learning Programme

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

Indicator 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 3: Academic Standards of the Graduates

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

Indicator 4: Effectiveness of Quality Management and Assurance

The arrangements in place for managing the programme, including quality assurance, give confidence in the programme.

The Review Panel (hereinafter referred to as ‘the Panel’) states in the Review Report whether the programme satisfies each Indicator. If the programme satisfies all four Indicators, the concluding statement will say that there is ‘confidence’ in the programme.

If two or three Indicators are satisfied, including Indicator 1, the programme will receive a ‘limited confidence’ judgement. If one or no Indicator is satisfied, or Indicator 1 is not satisfied, the judgement will be ‘no confidence’, as shown in Table 1 below.

Table 1: Criteria for Judgements

Criteria	Judgement
All four Indicators satisfied	Confidence
Two or three Indicators satisfied, including Indicator 1	Limited Confidence
One or no Indicator satisfied	No Confidence
All cases where Indicator 1 is not satisfied	

1.2 The Programmes-within-College Reviews Process at Ahlia University

A Programmes-within-College review of the College of Information Technology was conducted by the DHR of the QQA in terms of its mandate to review the quality of higher education in Bahrain. The site visit took place on 6–9 October 2013 for the academic programmes offered by the College, these are: the Bachelor in Information Technology (BSIT), the Bachelor in Distributed Systems and Multimedia (BSDSM), and the Master in Information Technology and Computer Science (MITCS).

This report provides an account of the review process and the findings of the Panel for the MITCS based on the Self-Evaluation Report (SER) and appendices submitted by Ahlia University (AU), the supplementary documentation made available during the site visit, as well as interviews and observations made during the review site visit.

AU was notified by the DHR/QQA on 15 May 2013 that it would be subject to Programmes-within-College reviews of its College of Information Technology with the site visit taking place from 6-9 October 2013. In preparation for the review, AU conducted its college self-evaluation of all its programmes and submitted the SER with appendices on the agreed date in 15 July 2013.

The DHR constituted a Panel consisting of experts in the academic field of Information Technology and Computer Science and in higher education who have

experience of external programme quality reviews. The Panel comprised four external reviewers.

This Report records the evidence-based conclusions reached by the Panel based on:

- (i) analysis of the Self-Evaluation Report and supporting materials submitted by the institution prior to the external peer-review visit
- (ii) analysis derived from discussions with various stakeholders (faculty members, students, graduates and employers)
- (iii) analysis based on additional documentation requested and presented to the Panel during the site visit.

It is expected that the AU will use the findings presented in this report to strengthen its MITCS programme. The DHR recognizes that quality assurance is the responsibility of the higher education institution itself. Hence, it is the right of AU to decide how it will address the recommendations contained in the Review Report. Nevertheless, three months after the publication of this Report, AU is required to submit to the DHR an improvement plan in response to the recommendations.

The DHR would like to extend its thanks to AU for the co-operative manner in which it has participated in the Programmes-within-College review process. It also wishes to express its appreciation for the open discussions held in the course of the review and the professional conduct of the faculty in the MITCS programme.

1.3 Overview of the College of Information Technology

The College of Information Technology is one of six colleges at Ahlia University (besides the Deanship of Student Affairs). It consists of two departments: (1) the Department of Information Technology which offers the Bachelor's Degree in Information Technology (BSIT) and the Master's Degree in Information Technology and Computer Science and (2) the Department of Multimedia Science which offers the Bachelor's Degree in Distributed Systems and Multimedia (BSDSM).

1.4 Overview of the MITCS Programme

Ahlia University's Master's programme in Information Technology and Computer Science (MITCS) was launched in January 2003. It is offered by the Department of IT of the College of IT. The programme has since undergone several revisions that have taken into account the stakeholders' feedback, market needs, and benchmarking results.

The MITCS degree requires passing a total of 36 credits in one of four specialization tracks: Information Systems, Computer Science, Networking and Security, and Distributed Systems and Multimedia.

There are 45 students currently registered in the MITCS programme while 66 have already graduated.

1.5 Summary of Review Judgements

Table 2: Summary of Review Judgements for the MITCS Programme

Indicator	Judgement
1: The Learning Programme	Satisfies
2: Efficiency of the Programme	Satisfies
3: Academic Standards of the Graduates	Satisfies
4: Effectiveness of Quality Management and Assurance	Satisfies
Overall Judgement	Confidence

2. Indicator 1: The Learning Programme

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

- 2.1 The aims of the MITCS programme are clearly specified in Appendix 1 of the SER. These aims describe the broad purposes of providing the programme and they align well with the mission of the institution and the College. Aim 10.3 refers to the area of specialization of the student. Since the MITCS programme has reduced the number of specializations from four to one, this aim needs to be rewritten to reflect the fact that the MITCS programme has no specialization area. Nevertheless, the Panel appreciates that the programme aims are clearly specified and align well with the mission of the institution and the College.
- 2.2 The curriculum is well structured. It has foundation courses that do not count towards the credits needed to graduate; core courses; elective courses; and a dissertation. The dissertation is identified as Track 1. Since there is only one track in the MITCS programme, that Track 1 label is redundant. The mix of courses affords many opportunities to provide a good balance between knowledge and skills and between theory and practice. The curriculum is undergoing revision to keep topic coverage current. The curriculum is appropriate for a suitably named MS degree. The Panel appreciates that the curriculum is well organized to provide academic progression.
- 2.3 Since there are very few similarly named programmes globally, it is difficult to assess whether the syllabus meets the norms and standards of the disciplinary field. Whilst there is a programming component within the MITCS, this needs to be strengthened so that every graduate has strong programming skills. The Panel encourages the College to ensure that the programming component is more robust when the curriculum is revised. The Panel noted a mismatch between course title and content for two of the courses in the MITCS programme, which needs to be addressed.
- 2.4 In established fields such as IT and CS, graduate courses build upon knowledge acquired in undergraduate courses and/or other graduate courses in the programme. This means that one would expect (almost) every course in an MITCS programme to specify one or more prerequisites. Only one course (ITCS 599 Dissertation in IT and Computer Science) in the MITCS programme does this. However, the absence of more pre-requisites may be due to the admissions policy in which an IT-related BSc degree is required.
- 2.5 Some courses in the MITCS programme have a counterpart in the BSIT programme (ECTE 302, ECTE 531, ITCS 311, and ECCE 503). Often there is significant overlap in weekly topics listed for the graduate and undergraduate versions and the texts and

references are very similar. The Panel recognizes that it is possible to teach a topic at the undergraduate and graduate levels using the same text. Nevertheless, the Panel recommends that a mechanism be developed to ensure the appropriateness of the level of the courses.

- 2.6 The programme ILOs are specified in Appendix 1 of the SER. Although the SER does not explicitly link the ILOs to the aims of the programme, it is easy to see that the specified ILOs support the programme aims. The ILOs are also appropriate for a Master's degree. The Panel appreciates that the programme level learning outcomes are well aligned with the programme aims.
- 2.7 The course-level ILOs for each course are documented in the course specification and syllabus. Each course level ILO is mapped to a programme level ILO. Some course level ILOs are vague and/or not specified as measurable skills (e.g., in ECTE 531 Advanced Networking, ILO A1 is 'Concepts and Theories: related to data networking and involved layers' and A2 is 'Contemporary Trends, Problems and Research: Related to various TCP/IP layers and protocols'. The Panel appreciates that each course specifies ILOs that are mapped to programme-level outcomes. On the other hand, it recommends that course ILOs be revised to ensure all are specified as measurable skills.
- 2.8 Although some MITCS students do a dissertation on a topic that is related to their work, the MITCS programme itself does not have an element of work-based learning. This is appropriate.
- 2.9 The MITCS programme employs a variety of teaching methods such as lectures, laboratories, case studies, student presentations, and individual and team assignments. Collectively, these support the attainment of the aims and ILOs of the programme. The Panel appreciates that a wide range of teaching methodologies that support programme aims and outcomes is used.
- 2.10 AU has well-defined and documented policies and procedures governing student assessment. These are disseminated to faculty via training workshops, the AU Assessment Manual, and other documents. Students obtain this information from the University Catalogue, Student Guide, and AU's web site. The Panel appreciates that suitable assessment arrangements are broadly in place.
- 2.11 In coming to its conclusion regarding The Learning Programme, the Panel notes, *with appreciation*, the following:
- The programme aims are clearly specified and align well with the mission of the institution and the College.
 - The curriculum is well organized to provide academic progression.

- The programme level learning outcomes are well aligned with the programme aims.
- Each course specifies ILOs that are mapped to programme-level outcomes.
- A wide range of teaching methodologies that support programme aims and outcomes is used.
- Suitable assessment arrangements are broadly in place.

2.12 In terms of improvement the Panel **recommends** that the Department should:

- correct any mismatch between course title and content
- develop a mechanism to ensure the appropriateness of the level of the courses
- revise course ILOs to ensure all are specified as measurable skills.

2.13 **Judgement**

On balance, the Panel concludes that the programme **satisfies** the Indicator on **The Learning Programme**.

3. Indicator 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.

- 3.1 The overall university-wide admission policy is rather liberal and the specific requirements for IT-oriented programmes is less clear in the SER. However, for the MITCS programme, an IT-related BSc degree is required. A 'minimum GPA of normally 2.5' is mentioned in the SER. This is on the low side for a Master's level programme. MITCS students have a 'a mean GPA of 2.89 with a standard deviation of 0.65'. There have been 34 students (currently six) with a GPA of below 2.5, however they are required to take foundation courses. Nevertheless, the Panel is of the view that the College needs to revisit its admission criteria to ensure its effectiveness.
- 3.2 Mathematics is particularly important for the MITCS programme and readiness for study in this area needs to be checked rigorously. The Panel was concerned that the English skills of some students were not at a level where a degree programme taught in English could be undertaken completely satisfactorily. The provision of further support courses for such students would be appropriate and action taken if the required level is not achieved. The available resources are suitable for IT students. The Panel suggests that a mathematical placement test be used to ensure the appropriateness of students on the MITCS programme with BSc degrees not directly in IT or computer science.
- 3.3 The Panel was pleased to find that that students with special needs are considered and adjustments are made to accommodate such students once admitted.
- 3.4 There are clear lines of accountability with regard to the management of the programme in the College of IT. The clarity and detail of the university and college organisational charts could be improved. The clarity of decisions (or actions) in minutes of meetings, particularly with regard to the recording of the implementation of decisions in subsequent meetings, could be more explicitly recorded in the minutes to improve transparency of the management. No explicit examples of the minutes are cited in the SER for the MITCS programme. In practice this is documented in letters. During the interviews, it was evident that faculty members understood the processes well in general. The Panel appreciates that there are clear lines of accountability with regard to the management of the MITCS programme.
- 3.5 Most faculty members have PhDs in computer science, but some are in related fields or at Master level. The Panel did not see all the faculty members during the site visit.

Timetables for part-time lecturers were also provided during the site visit. Some are on the high side, but acceptable. The staff-student quoted is improved by including staff with an administrative role as well as lecturers, as evidenced during discussions. In general, faculty members are appropriate for the MITCS programme.

- 3.6 The recruitment of staff already at AU (e.g. part-time staff becoming full-time staff) could be more transparent, as reported during interviews with faculty members. Appraisal processes are in place, but there have been no promotions in the College of IT in recent years. This may indicate a lack of time available to faculty members to achieve the required research criteria for promotion, due to teaching load for example. Adequate research time is especially important for faculty members teaching on the MITCS programme. Staff appointments are documented, but there is no documentation about why staff leave. There is formal staff induction conducted. The Panel recommends that the College ensure that academic staff have adequate time to conduct research in order to keep abreast with new knowledge in their discipline.
- 3.7 The ADREG system at AU is a useful and flexible management information system. Faculty members use the system to track students, including at-risk students. There is a dedicated team at AU to add new features to the ADREG system when required. Overall, this is a very helpful system for the effective running of AU. The Panel appreciates that ADREG is a useful, well-liked and flexible management information system.
- 3.8 AU has a server backup and restore procedure, including disk backup and tape backup in a secure location both on-site and off-site. Student files are stored in filing cabinets on-site in the Office of Administration and Registration, but are also scanned electronically. Student results are verified by the lecturer, chairperson, and dean according to the SER. A quality assurance (QA) data officer also monitors the process. However, there is no second-marking of assessed work or examinations in general (apart from dissertations), as evidenced by assessed work and examination scripts viewed on-site. Thus, the accuracy of marking at this level is not checked. The Panel recommends the programme team develop and implement a policy/procedure for checking and monitoring the marking of student work in assessments and examinations.
- 3.9 The available resources in terms of IT laboratories and classrooms (including some with smart boards) are adequate with respect to MITCS programme student needs. IT laboratories have an open door policy when not in use and laboratory assistants are available. Formal class utilisation of IT laboratories leaves adequate time for students to use the facilities during free periods. Space available for students at each workshop could usefully be increased.

- 3.10 The library provides study space, including a separate room for Masters' students. Digital resources are provided. Although modest in scale, they are appropriate for a university of the size of AU. Wi-Fi access is available throughout the campus, a particularly important facility for IT students. During interviews the Panel found that there is general student satisfaction with all these aspects. The Panel appreciates that IT equipment is adequate and reasonably new with good access and multimedia support.
- 3.11 The ADREG system tracks laboratory and classroom usage. Usage of library resources is tracked separately. The Moodle VLE is used by the MITCS programme and has its own tracking report facilities.
- 3.12 There is a head librarian and support team enabling adequate opening hours and support in the library. Moodle is used to provide electronic resources for all courses. As well as standard resources such as slides and notes, some courses use facilities such as online student discussions where appropriate. Students are allocated an academic advisor and the system works well with a good amount of real contact and support, as evidenced by discussions with students. The ADREG system effectively supports students who do not maintain contact and when they become at risk. The advising support provided is above average with appropriate policies and procedures. The Panel met with a student counsellor and counselling is available for more serious issues. Students with special needs are also supported. The Panel appreciates that the Moodle VLE has been fully embraced by both faculty members and students and that the student advising system at AU works well.
- 3.13 Appropriate orientation is provided for new students. However, the Panel heard during interviews with students that some miss the induction. AU could consider putting procedures in place to encourage more students to attend induction. The induction should cover all aspects of student conduct, including plagiarism. One misconduct issue is that many students freely admitted to photocopying textbooks for courses. This is in violation of copyright. The Panel recommends that the institution take urgent steps to discourage this activity. The Panel is of the view that the orientation programme is an important feature at AU.
- 3.14 There is a policy for supporting at-risk students. The advising system at AU, in combination with the ADREG system, provides an effective mechanism for detecting and dealing with at-risk students. However, the Panel noted that there are students who have been at AU for a significant period due to problems. This needs to be addressed.
- 3.15 An IT and Engineering Colloquium that includes lectures is available to students on the MITCS programme with online information available on the AU website. The Panel finds that extra-curricular activities are limited due to AU's location and that

there are no outdoor facilities. A planned new campus will improve matters in due course, but this is several years away. The Panel encourages AU to continue in its efforts to move to a larger campus.

3.16 In coming to its conclusion regarding the Efficiency of the Programme, the Panel notes, *with appreciation*, the following:

- Students with special needs are considered at AU.
- There are clear lines of accountability with regard to the management of the MITCS programme.
- ADREG is a useful, well-liked and flexible management information system.
- IT equipment is adequate and reasonably new with good access and multimedia support.
- The Moodle VLE has been fully embraced by both faculty members and students.
- The student advising system works well.

3.17 In terms of improvement, the Panel **recommends** that the College should:

- ensure that academic staff have adequate time to conduct research to keep abreast with new knowledge in their discipline
- develop and implement a policy/procedure for checking and monitoring the marking of student work in assessments and examinations
- devise mechanisms to discourage students from photocopying textbooks.

3.18 **Judgement**

On balance, the Panel concludes that the programme **satisfies** the Indicator on **Efficiency of the Programme**.

4. Indicator 3: Academic Standards of the Graduates

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

- 4.1 Graduate attributes are clearly stated in terms of aims and outcomes at both the programme and course levels. In principle, the assessment instruments in use (examinations, quizzes, assignments, projects, and dissertation) are able to assess outcomes reliably. The Panel appreciates that graduate attributes are clearly stated in terms of aims and outcomes.
- 4.2 Since there are almost no other programmes named MITCS, reliable benchmarking is difficult. Nevertheless, benchmarking was done against the ACM/AIS 2006 model curriculum for the master's degree in Information Systems as well as against masters' degrees in Information Technology as well as those in Computer Science at two American, two Australian, one British, and one regional university. The validity of this benchmarking at the global curriculum level is questionable as the degree titles are different. IS, IT, and CS programmes often have courses with the same or similar title but differ in content and delivery. However, benchmarking in this way to ensure appropriate structure (credit distribution across core, electives, and dissertation) is valid. Benchmarking has resulted in structural changes such as increasing the number of electives. Other structural changes (reduction in number of specializations from four to one) have resulted from external evaluation. The structural validation against the MSIS 2006 model curriculum concludes that 'The newly structured MITCS programme meets the desiderata of the MSIS2006'. The benchmarking of individual courses of the MITCS programme against similarly named courses in master's programmes at other universities is done by comparing course descriptions. The Panel noted that the benchmarking study concludes that every course in the MITCS programme has good commonality with at least one master's level course in a benchmark programme.
- 4.3 AU has well documented policies and procedures for student assessment. External moderation was introduced in May 2013, however this has yet to be implemented. The Panel was provided with a programme evaluation report conducted by a faculty member at King Fahad University of Petroleum and Mines (KFUPM) in July 2013. This external assessor had also evaluated the MITCS programme in 2010. The July 2013 report noted that the recommendations of the 2010 report had been implemented and made additional recommendations related to course syllabi, ILOs, and assessment of software projects. The Panel found the assessment policies are implemented, monitored, and reviewed.

- 4.4 AU conducts both internal and external moderation of assessment. External moderation takes place after a course has run while internal moderation occurs during a course. Thus, the results of internal moderation can be made available to the external moderator. Internal moderation is done by a committee comprised of the course lecturer, chairperson, and another faculty member familiar with the subject matter of the course verifies alignment with outcomes. This verification is, however, limited to the final examination. To ensure that every component of every course level ILO is assessed, it is necessary to do this verification for all assessment instruments, as the final examination cannot assess, for example, ILOs that deal with teamwork and oral communication skills. AU has a plan to extend this internal verification to all assessment instruments. The Panel encourages the institution to expedite the implementation of its plan.
- 4.5 Internal moderation of assessment is done using a course-specific three-member committee structure. This committee examines the marking of randomly selected examination scripts. A random script from each of three categories (high, medium, and low scores) is moderated. An examination of course files did not reveal any cases of inaccurate marking. The Panel concludes that the internal moderation of grading student achievement is working well.
- 4.6 The final examinations of approximately 20% of the courses are externally moderated each year, which the Panel appreciates. The external moderator provides feedback on assessment. The July 2013 external evaluator's report makes a suggestion concerning the assessment of software projects. During the site visit, the Panel was informed that AU would implement this suggestion. The Panel examined the samples of students' assessed work available in the course files for all courses in the MITCS programme as well as a few of the dissertations made available to it. In some courses (e.g. ECTE 531 Advanced Networking and ITMA 570 Management Information Systems), multiple choice questions are used which do not necessarily test high level thinking. Furthermore, in some courses (e.g., ECTE 302, ITCS 506, ITMA 570) the ILOs were not fully assessed. The Panel recommends that the College put in place mechanisms to ensure consistency in assessment so that all course-level outcomes are fully assessed at the appropriate level.
- 4.7 The institution has a policy on plagiarism. The guidelines for dissertation require that each dissertation be evaluated by Turnitin for plagiarised content. The Panel found evidence of cases of plagiarism which had been detected by the institution using Turnitin. However, the Panel also found many instances of plagiarism from Internet sources. Furthermore, the plagiarism policy for dissertations specifies remedies to a report when the Turnitin score is between 15% and 30%, and that the document should be rejected when the score exceeds 30%. The institution needs to ensure that any score is investigated to ascertain whether plagiarism has taken place

or whether Turnitin is showing referenced work. The Panel recommends that the institution ensure that its policy on plagiarism is implemented effectively.

- 4.8 The Panel found that some of the examined dissertations are of good quality, while others are not at the master's level. The Panel recommends that further mechanisms be developed to ensure that all dissertations are at an appropriate level.
- 4.9 Of the 156 students admitted to the programme since inception, 32 (20.5%) have been dismissed or suspended. The remaining students have either graduated or are currently in (including temporarily withdrawn from) the programme. The Panel is of the view that these rates are in line with similar programmes internationally.
- 4.10 AU has well-developed policies and procedures for the supervision and assessment of the MITCS dissertation. These policies and procedures have been revised frequently with each revision being triggered by a reported weakness. Student progress is tracked by ADREG and department chairs monitor ADREG to ensure supervisors 'are meeting their obligations to students'. The Panel appreciates that there are well-defined policies and procedures governing the MS dissertation that are monitored and revised.
- 4.11 An IT & Engineering College Advisory Board was established at the beginning of 2013 and its inaugural meeting was in February. The Panel met with five Board members and was pleased with the level of enthusiasm shown. Despite the infancy of this board, it has made constructive recommendations for the MITCS curriculum that AU is in the process of implementing. The roles and responsibilities of the advisory board are fully documented. The Panel appreciates that the advisory board is enthusiastic and meets once a month. It has made valuable constructive suggestions to enhance the MITCS curriculum.
- 4.12 The Panel met with several graduates of the MITCS programme all of whom were very satisfied with the education they received at AU as well as with the learning environment at AU. Although the Panel met with three employers of graduates of the College of IT, only one had experience with graduates of the MITCS programme. This employer, who had two employees who joined the MITCS programme, reported a marked increase in the skill and leadership attributes of these two employees as they progressed and eventually graduated from the MITCS programme. The views expressed by this employer echoed those of the graduates whom the Panel met; that the MITCS programme has made valuable enhancements to the skills of students.
- 4.13 In coming to its conclusion regarding the Academic Standards of the Graduates, the Panel notes, *with appreciation*, the following:

- Graduate attributes are clearly stated in terms of aims and outcomes.
- External moderation of the final examination is done.
- The internal moderation of grading student achievement is working well.
- There are well-defined policies and procedures governing the MS dissertation that are monitored and revised.
- The programme advisory committee's contributions to the MITCS curriculum are constructive.

4.14 In terms of improvement, the Panel **recommends** that the Department should:

- expedite the plan to extend internal verification to all assessment instruments
- put in place mechanisms to ensure consistency in assessment so that all course-level outcomes are fully assessed at the appropriate level.
- ensure the effective implementation of the plagiarism policy
- develop further mechanisms to ensure that all dissertations are at an appropriate level.

4.15 **Judgement**

On balance, the Panel concludes that the programme **satisfies** the Indicator on **Academic Standards of the Graduates**.

5. Indicator 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.

- 5.1 AU has a well-defined structure of governance in charge of the implementation of policies, procedures and regulations. This structure includes the Board of Directors, Executive Committee, Board of Trustees, External Advisory Boards, University Council, College Councils, Department Councils, along with standing committees and selected university-wide committees such as the Teaching and Learning Committee (TLC). Broadly, the roles and responsibilities of these are well defined and policies, procedures and regulations are in place to ensure the proper functioning of the University. The Panel appreciates AU's well-defined governance and management structure.
- 5.2 AU has a dedicated centre, the Ahlia Center for Information and Documentation (ACID), which is responsible for the warehousing of information and documentation and its dissemination (website, Sharepoint). It is also in charge of the collection of university statistics. The Panel found during interviews with a range of staff that they have knowledge of the university policies and procedures and are involved in the implementation of the ones relevant to their duties. This confirms the findings in the survey on university-wide awareness and involvement of academic and administrative staff.
- 5.3 In terms of Quality Assurance, the Centre for Accreditation and Quality Assurance (CAQA) is responsible for the definition, monitoring, and implementation of the Ahlia University Quality Management Information System (AUQMS), a set of policies, processes, procedures and regulations for QA. Although much work has been done in terms of quality assurance at AU, the Panel found that in various instances 'the loop' was not closed hence the College does not obtain the full benefit from the quality assurance data collected from the various stakeholders, assessments/moderations. The Panel appreciates that there are arrangements for the management and assurance of quality at the University and the College of IT, and encourages the College to ensure that results are implemented.
- 5.4 The College of IT is led by the Dean who is helped by an Associate Dean and a Department Chair for each of the two departments (IT and Multimedia). A College Council and one Council for each department are the respective authorities for the follow up of the matters related to the programmes. The College interacts positively with the university directorates towards the implementation of the university strategic plan, policies and procedures, which the Panel appreciates. The

departments and faculty members cooperate with this overall effort in the implementation and improvement of the programme. During interviews with managers, the Panel was told that in some cases, decisions that could have been taken at the Dean's level were forwarded unnecessarily to the TLC; likewise, decisions that could have been taken at the TLC's level were forwarded unnecessarily to the University Council. The Panel recommends that the College investigate ways to streamline further the quality assurance process.

- 5.5 Overall, the Panel found good evidence that there are arrangements for the management and assurance of quality at the University and the College of IT. Various policies, procedures and regulations are in place and give reassurance about the University's commitment to improve continuously the quality of its programmes. The College of IT is working in line and cooperatively with the university Quality Assurance Management System. A Programme-within-College Review (PCR) Team has been set up and has been following the various aspects related to QA at the college level. According to these policies and procedures, the College collects feedback from the various stakeholders (students, employers, assessors, benchmarks). There is documented evidence that, based on the feedback collected from the various stakeholders; the College has prepared a 1- to 2-year action plan.
- 5.6 The IT faculty and the support staff have benefitted from the support of the University in terms of professional development on matters related to quality assurance. Training workshops are regularly given and various faculty members and support staff have participated in a number of them. There is documented evidence that the IT faculty and the support staff are aware of the university quality assurance drive and that they understand their duties in this regard. This understanding has been translated in terms of involvement in the College quality assurance system. The Panel appreciates that the teaching staff and support staff have shown understanding and involvement in the College quality assurance system.
- 5.7 A policy and procedure is in place for developing, reviewing, and closing down postgraduate programmes. The Panel is of the view that the policy and procedures are overall sound and well defined, however, it is not clear what triggers the development of new programmes or the frequency with which the need should be checked.
- 5.8 The university policies require the review of programmes every three years. In accordance with these policies, the College of IT has appointed the Master Internal Programme Review Committee (MIPRC) whose role is to 'review, revise and improve the MITCS programme in line with international standards'.
- 5.9 There is a policy for internal and external assessments. Internal evaluation is performed for every course every semester through verification and moderation by

a Department Moderation Committee. External examiners were also appointed to assess the MITCS programme. A short period before the site visit, the external assessors submitted their reports. The findings from these review processes are forwarded from the department to the College and from there, and upon approval, to the TLC, and then on to the University Council. The MIPRC follows up the improvements. There is evidence of modifications being made on the programme, which was initiated by the MITCS. The Panel appreciates that the College has implemented a process of internal and external assessments and reviews of its programmes and courses.

- 5.10 An IT & Engineering Advisory Board whose members have substantial experience was set up a year ago with the aim of providing feedback about the programme from a market/industry perspective. The Advisory Board has formulated various improvement suggestions and, as a result, this has already led to inclusion of new courses that are more relevant to the market.
- 5.11 AU requires that the programmes be reviewed over a three-year cycle. The responsibility to follow up this falls upon the MIPRC. There is evidence that an External Examiner/Assessor has been appointed to review the MITCS programme. The assessor submitted a report dated 15/7/2013 however no actions have yet been taken in this regard. Analysis needs to be expedited and changes made. External assessments of courses are performed and reports are collected from the External Assessors. This, according to the CAQA staff that the Panel interviewed is meant to lead to an annual review of the programme at the college level, a review which can then lead to a proposed improvement plan that would need to go through the College Council, the TLC and the University Council.
- 5.12 The University has a dedicated centre, the Center for Measurement and Evaluation (CME), to design surveys, collect, and analyse survey data. Survey data has been collected from various stakeholders: Students, Alumni, Graduates, and the College Advisory Board as part of the university QAMS. Except for suggestions to include some new courses that are more relevant to the market, e.g. 'Cloud Computing', 'Big Data Analytics' and 'Business Intelligence', the Panel has not found evidence that improvement have been made as a result of the analyses of these surveys. The Panel recommends that the College implement changes required from external assessor reports as well as from analysis of feedback collected from the various stakeholders.
- 5.13 During interviews with management, the Panel was informed that consultants specialized in Higher Education have been contracted to do a gap analysis. The scope of work spans over two years and started three months prior to the site visit. As a result no feedback had yet been provided to the institution.

- 5.14 The University has a dedicated centre, Ahlia Training and Development Center (ATDC), for the professional development of its teaching and non-teaching staff. The latter has designed an extensive staff professional development programme as shown through the Annual Professional Development Plan, usually a two-year. The Panel found evidence that various College of IT teaching staff as well as other support staff (such as library and IT staff) have attended a number of workshops related to their duties, e.g. on the design of programme and course ILOs, the use of Moodle, teaching and learning methodologies, and assessment methodologies. Each workshop was re-run to give a chance to faculty and staff to benefit from the training. Staff surveys have also been collected after these training programmes to assess their quality and to seek the staff's professional development needs. The Panel was informed during interviews with teaching staff that they have benefitted from these workshops.
- 5.15 Ahlia University and the College of IT have conducted surveys of the College of IT and Engineering Advisory Board and programme Alumni to find out the strengths and weaknesses of the programme as they relate to the market. The advisory board, which consists of a number of highly experienced and motivated members, has already suggested valuable improvements to the programme to make it more relevant to the market. However, the alumni survey, prepared by the AU Centre for Measurement and Evaluation, is a general survey, which seems to be the same for all colleges. Moreover, for the MITCS programme, the survey has been filled out by only eight alumni. The limited response is not unusual for surveys. In addition, the Panel was informed during the site visit that representatives from the College of IT are going to start an extensive effort to meet with presidents of IT societies and companies in a drive to strengthen the links with the industry and the market.
- 5.16 In coming to its conclusion regarding the Effectiveness of Quality Management and Assurance, the Panel notes, *with appreciation*, the following:
- There is a well-defined governance and management structure.
 - There are arrangements for the management and assurance of quality at the University and the College of IT.
 - The College of IT is positively interacting with the university-wide efforts on Quality Assurance.
 - The teaching staff and support staff have shown understanding and involvement in the College quality assurance system.
 - The College has implemented a process of internal and external reviews of its programmes and courses.
- 5.17 In terms of improvement, the Panel **recommends** that:
- investigate ways to streamline further the quality assurance process

- implement changes required from external assessor reports as well as from analysis of feedback.

5.18 **Judgement**

On balance, the Panel concludes that the programme **satisfies** the Indicator on **Effectiveness of Quality Management and Assurance**.

6. Conclusion

Taking into account the institution's own self-evaluation report, the evidence gathered from the interviews and documentation made available during the site visit, the Panel draws the following conclusion in accordance with the DHR/QQA *Programmes-within-College Reviews Handbook, 2012*:

There is confidence in the Master in Information Technology and Computer Science of the College of Information Technology offered by Ahlia University.