Self-Study Report

كلية العلوم بالزلفي
College of Science Al-Zulfi

Mathematics Program

January 2016
Self-Study Report

Contents

List of Tables ......................................................................................................................... 3
Self-Study Report .................................................................................................................. 6
Introductory Comments........................................................................................................... 6
Program Information .............................................................................................................. 6
  a. General Information ........................................................................................................ 6
  b. General Program Profile Information ........................................................................... 7
B. Periodic Program Profile Template B: College Data ........................................................ 9
C. Program Profile Data ....................................................................................................... 12
D. Self-Study Process ............................................................................................................ 18
E. Mission, Goals and Objectives ......................................................................................... 19
F. Program Context ............................................................................................................... 24
G. Program Developments ................................................................................................... 24
H. Evaluation in Relation to Quality Standards ................................................................... 25
  Standard 1. Mission Goals and Objectives (Overall Rating: ****) ..................................... 29
  Standard 2. Program Administration (Overall Rating: ****) .............................................. 37
  Standard 3. Quality Management and Improvement (Overall rating: ****) ....................... 44
  Standard 4. Learning and Teaching Overall Rating: (****) ............................................... 62
  Standard 5. Student Administration and Support Services (Overall Rating: * ** *) .......... 100
  Standard 6. Learning Resources (Overall rating ****) ...................................................... 124
  Standard 7. Facilities and Equipment (Overall Rating : ***) .......................................... 137
  Standard 8: Financial Planning and Management (Overall Rating: **) .......................... 151
  Standard 9. Employment Processes (Overall Rating: ****) ............................................. 156
  Standard 10. Research Overview (****) .......................................................................... 164
  Standard 11. Relationships with the Community (Overall Rating ***) ............................ 175
I. Review of Courses ............................................................................................................. 181
List of Tables

Table 1: Number of graduates in the most recent year .......................................................... 11
Table 2: Apparent Student Completion Rate: ........................................................................ 11
Table 3: Mode of Instruction – Student Enrolment ................................................................. 11
Table 4: Mode of Instruction – Teaching Staff ...................................................................... 11
Table 5: 1st level courses (pre-primary) ................................................................................ 13
Table 6: 2nd level courses (pre-primary) .............................................................................. 13
Table 7: 3rd level courses ..................................................................................................... 13
Table 8: 4th level courses ..................................................................................................... 13
Table 9: 5th level courses ..................................................................................................... 14
Table 10: 6th level courses ................................................................................................... 14
Table 11: 7th level courses .................................................................................................. 14
Table 12: 8th Level ............................................................................................................... 14
Table 13: Student Enrolment ................................................................................................. 15
Table 14: Confirmed enrollment at the beginning of the current academic year .................. 15
Table 15: No. of Staff ........................................................................................................... 15
Table 16: Post-graduation and academic members. .............................................................. 16
Table 17: No. of full-time faculty average credit workload .................................................. 16
Table 18: No of part-time faculty .......................................................................................... 17
Table 19: No. of Full-time Teaching Staff ........................................................................... 17
Table 20: Members of the Quality & Accreditation Unit ..................................................... 22
Table 21: Table 16: The work teams to verify the eleven standard of NACCC ....................... 22
Table 22: Enrollment Management and Cohort Analysis ..................................................... 24
Table 23: Comparison between planned and actual enrollments ........................................ 25
Table 24: Key Performance Indicators (KPI) ........................................................................ 26
Table 25: Appropriateness of the Mission ........................................................................... 30
Table 26: Appropriateness of the Mission .......................................................................... 31
Table 27 : Usefulness of the Mission Statement .................................................................. 32
Table 28 : Usefulness of the Mission Statement .................................................................. 32
Table 29 : Development and Review of the Mission ............................................................. 33
Table 30 : Use Made of the Mission Statement ................................................................... 35
Table 31 : Development and Review of the Mission ............................................................. 36
Table 32 : Permanent help and support ............................................................................... 42
Table 33: permanent and easy communication with the program management.................. 42
Table 34: Commitment to quality improvement in our program ......................................... 48
Table 35: Quality assurance processes ................................................................................. 51
Table 36: Quality assurance processes management ............................................................ 54
Table 37: using of performance indicators and reference points ......................................... 57
Table 38: Independent verification of the evaluation .............................................................. 59
Table 39: The result of this questionnaire is given as ........................................................... 63
Table 40: Available number of E-podium, smart boards and projectors ............................... 138
List of Figures

Figure 1: College of Science - Quality Management system (QMS) .................................................. 23
Figure 2: Appropriateness of the Mission .......................................................................................... 31
Figure 3: Usefulness of the Mission Statement ................................................................................. 32
Figure 4: Development and Review of the Mission ........................................................................... 34
Figure 5: Use Made of the Mission Statement .................................................................................. 35
Figure 6: Development and Review of the Mission ........................................................................... 36
Figure 7: Permanent help and support ............................................................................................. 42
Figure 8: Permanent and easy communication with the program management ................................. 43
Figure 9: Commitment to quality improvement in our program ....................................................... 49
Figure 10: Quality assurance processes ............................................................................................ 52
Figure 11: Quality assurance processes management ........................................................................ 55
Figure 12: Using of performance indicators and reference points ................................................... 57
Figure 13: Independent verification of the evaluation ....................................................................... 59
Figure 14: Levels for approval of changes in courses and program ............................................... 64
Figure 15: Quality of education you received at Mathematics Program ............................................ 95
Figure 16: Teaching Quality at Mathematics Program ....................................................................... 96
Figure 17: Teaching style at Mathematics Program ........................................................................... 96
Figure 18: Curriculum at Mathematics Program ................................................................................ 97
Figure 19: The Infrastructures at Mathematics Program ................................................................. 97
Figure 20: MU helped me to enter the labor ..................................................................................... 98
Figure 21: Possessing of the technical skills ..................................................................................... 98
Figure 22: Graduates are characterized by the enjoyment of high work ethics ................................ 99
Figure 23: What skills do you think you are missing from when you join the labor market? .......... 99
Figure 24: Admission and registration operations are easy for students use ........................................ 103
Figure 25: Admission Requirements are regular and fair ................................................................. 103
Figure 26: Information of need skills for study through education .................................................. 104
Figure 27: Mentors offered for students by mathematics Department .............................................. 104
Figure 28: Mathematics Department determines Rules of acceptance supported ............................... 105
Figure 29: University Administration classifying the students by the courses ................................ 106
Figure 30: Availability of the Foundation Information ....................................................................... 106
Figure 31: Institution provides a comprehensive record to provide to new students ....................... 107
Figure 32: Effective Protection of students’ records provided by MU .............................................. 108
Figure 33: The official and policies instructions of student's records, determined by MU .................. 109
Figure 34: The University is totally authorized to control the confidential information .................. 109
Figure 35: The University achieved officially from fulfilling the student's requirements for graduation 110
Figure 36: The rights of students and their responsibilities were cleared for them ............................. 111
Figure 37: University Defined regulations and actions ....................................................................... 112
Figure 38: The University shall take disciplinary actions without delay .......................................... 112
Figure 39: The University describes the procedures appeals and grievances .................................... 113
Figure 40: Procedures of appeals and grievances included do not waste time .................................. 114
Figure 41: Procedures of Appeals and grievance included addressing issues .................................... 114
Figure 42: The University established Procedures ............................................................................. 115
Figure 43: Services and resources allocated for students ................................................................. 116
Figure 44: The University monitors the effectiveness of services and appropriate control ............... 117
Figure 45: University Provides appropriate places and financially support adequate student Services.. 117
Figure 46: MU is choosing specialists, to work in students Services Guide and medical service .......... 118
Figure 47: Medical Services and counseling are accessible easily and be available when needed ......... 119
Figure 48: Academic, career guidance, and vocational are rooming in the appropriate location ........ 119
Figure 49: MU creates opportunities to perform religious duties according to the regulations .......... 120
Figure 50: Organize and encourage the participation of the students in cultural activities by MU ...... 121
Figure 51: Encouraging students who are skilled in sports to participate in activities ....................... 121

*Figure 52: Describes the means of communication for Center* .......................................................... 130
Figure 53: Identification of the achievements of faculty members ..................................................... 130
Figure 54: Describing the identification of the adequacy of office support and resources ............... 131
Figure 55: Describes the identification of easy access to faculty members and officials .................... 132
Figure 56: Questionnaire illustrates the extent of faculty staff deal with customers fairly and equality 132
Figure 57: Describes a method to identify faculty members deal with officials and good reception ..... 133
Figure 58: The provision of library programs to create guidelines and training ................................. 135
Figure 59: Assistance library users to search and access to the information .................................... 136
Figure 60: The quality of the classrooms facilities ............................................................................. 143
Figure 61: The classrooms and laboratories were ready for faculty members ................................... 143
Figure 62: Members to assess the level of performance ...................................................................... 177
Figure 63: Members to assess the level of performance ...................................................................... 179
Figure 64: Shows students overall rating on the quality of their courses .......................................... 183
Self-Study Report

Introductory Comments

A program self-study is a thorough examination of the quality of a program. The mission and objectives of the program and the extent to which they are being achieved are thoroughly analysed according to the standards for quality assurance and accreditation defined by the NCAAA.

A Self Study Report for Programs (SSRP) should be considered as a research report on the quality of the program. It should include sufficient information to inform a reader who is unfamiliar with the program about the process of investigation and the evidence on which conclusions are based to have reasonable confidence that those conclusions are sound.

Conclusions should be supported by evidence, with verification of analysis and advice from others able to offer informed and independent comments.

This SSRP should include all the necessary information for it to be read as a complete self-contained report on the quality of the program.

The main branch/location campus must complete the entire SSRP together with the required information from all branch/location campuses that offer the program.

Each branch/location campus must complete an abridged, short version, of the SSRP; including the Periodic Program Profile, Profile sections (A-H) and standards 3, 4, and 11. After analysis and inclusion of required information, the main branch campus will submit the complete SSRP with the abridged versions to NCAAA.

The Self Study Report for Programs template is for an Undergraduate Program. For guidance on the completion of this template, please refer to the Handbook for Quality Assurance and Accreditation and to the Guidelines for Using the Template for a Program Self-Study.

Program Information

a. General Information

<table>
<thead>
<tr>
<th>Institution</th>
<th>Majmaah University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title of College and Department in which the program is offered</td>
<td>College of Science in Zulfi, Department of Mathematics.</td>
</tr>
<tr>
<td>Title of Program</td>
<td>Bachelor degree in Mathematics.</td>
</tr>
<tr>
<td>Date of Report</td>
<td>January 30, 2015</td>
</tr>
</tbody>
</table>
## General Program Profile Information

1. **Program title and code:** Mathematics, MATH

2. **Credit hours required for the program completion:** 137 credit hours

3. **Award(s) granted on completion of the program (for community college programs, add degree granting policy):** Bachelor of Science in Mathematics (B.Sc. in Mathematics)

4. **Major tracks or pathways within the program:** Only Mathematics

5. **Professional occupations (licensed occupations, if any) for which graduates are prepared:**

   1. Continue higher educations in physics and obtain their PhD degree.
   2. Working at research centers and universities.
   3. Working at public and private sectors of education.
   4. Working at medical laboratories, running machines, recycling its wastes.
   5. Working in the industry sector.
   6. Working at power stations.
   7. Working at water stations, Ministry of Petrol, and Geology.
   8. Working as a research assistant at King Abdul-Aziz City for Science and Technology.
   9. Working at specialized research centers, quality control Labs., standards and measurements bureau.
   10. Working in the Ministry of Health, like hospitals; specialized in radiation protection.
   11. Control in some war machines within the army.
6. Name of program chair/ coordinator. If a program coordinator or manager has been appointed for the female section as well as the male section, include names of both.

<table>
<thead>
<tr>
<th>Program coordinator</th>
<th>Program manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Ahmed Elmoasry</td>
<td>Prof. Dr. Adel M. Zaki</td>
</tr>
<tr>
<td><a href="mailto:amoasry@yahoo.com">amoasry@yahoo.com</a></td>
<td><a href="mailto:adelnzaki@hotmail.com">adelnzaki@hotmail.com</a></td>
</tr>
</tbody>
</table>

7. Branches/locations of the program. If offered on several campuses or by distance education as well as on-campus, including details. Zulfi, Campus of colleges

8. Date of approval of program specification within the institution:

The program was introduced in 1426 H- 2007 G. Since then, the study plan has been updated several times. The last update was approved by the Department Board in 1434 H. 2013 and by College Board in 1435 H. 2014.

9. Date of approval by the authorized body (Ministry of Higher Education “MoHE” for private institutions) and Council of Higher Education for public institutions).

10. Date of most recent self-study (if any): This is the first self-study report.
### B. Periodic Program Profile Template B: College Data

**College:** Sciences  
**Program:** Mathematics

#### Table 1: Faculty/Teaching Staff Members

<table>
<thead>
<tr>
<th>#</th>
<th>Names</th>
<th>M</th>
<th>Nationality</th>
<th>Academic Rank</th>
<th>General Specialty</th>
<th>Specific Specialty</th>
<th>Institution Graduated From</th>
<th>Degree</th>
<th>Full or Part-Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Zaki, Adel Mohamed</td>
<td>✓</td>
<td>Egyptian</td>
<td>Professor</td>
<td>Mathematics</td>
<td>Functional Analysis</td>
<td>Cairo, Egypt</td>
<td>Ph. D</td>
<td>✓</td>
</tr>
<tr>
<td>2</td>
<td>Abd EL-Hakiem, Mohamed</td>
<td>✓</td>
<td>Egyptian</td>
<td>Professor</td>
<td>Mathematics</td>
<td>Fluid Mechanics</td>
<td>Asuit, Egypt</td>
<td>Ph. D</td>
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</tr>
<tr>
<td>3</td>
<td>Khafagy, Salah</td>
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<td>Ass. Professor</td>
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<td>Functional Analysis</td>
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</tr>
<tr>
<td>4</td>
<td>Alhussain, Zyiad</td>
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<td>Saudi</td>
<td>Ass. Professor</td>
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<td>Mathematical Statistics</td>
<td>Egypt</td>
<td>Ph. D</td>
<td>✓</td>
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<tr>
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<td>Pure Mathematics</td>
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<td>Ass. Professor</td>
<td>Mathematics</td>
<td>Topology</td>
<td>Egypt</td>
<td>Ph. D</td>
<td>✓</td>
</tr>
<tr>
<td>7</td>
<td>Megahed, Abd EL-Monem</td>
<td>✓</td>
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<td>Ass. Professor</td>
<td>Mathematics</td>
<td>Operations Researches</td>
<td>Egypt</td>
<td>Ph. D</td>
<td>✓</td>
</tr>
<tr>
<td>8</td>
<td>Kellil Rabeh</td>
<td>✓</td>
<td>Tunisian</td>
<td>Ass. Professor</td>
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<td>PDE</td>
<td>Tunis</td>
<td>Ph. D</td>
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<td>KHALIL, Omar</td>
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<td>✓</td>
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<td>Rough Sets.</td>
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<td>Topology</td>
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<td>Ass. Professor</td>
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<td>13</td>
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<td>Ass. Professor</td>
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<td>Complex Analysis</td>
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<tr>
<td>#</td>
<td>Names</td>
<td>Nationality</td>
<td>Academic Rank</td>
<td>General Specialty</td>
<td>Specific Specialty</td>
<td>Institution Graduated From</td>
<td>Degree</td>
<td>Full or Part-Time</td>
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<td>AbuQarneen, Nayef</td>
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<td>Mathematics</td>
<td>KSA</td>
<td>BSc.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 1: Number of graduates in the most recent year

<table>
<thead>
<tr>
<th></th>
<th>Undergraduate Students</th>
<th>Post Graduate Masters Students</th>
<th>Post Graduate Ph.D. Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>32</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Female</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Totals</td>
<td>32</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Apparent Student Completion Rate: The number of students who graduated in the most recent year as a percentage of those who commenced those programs in that cohort four, five, or six years previously (e.g. for a four year program the number of students who graduated as a percentage who commenced the program four years previously).

Table 2: Apparent Student Completion Rate:

<table>
<thead>
<tr>
<th>Students</th>
<th>Undergraduate Programs</th>
<th>Postgraduate Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Four Years</td>
<td>Five Years</td>
</tr>
<tr>
<td>Male</td>
<td>11</td>
<td>15</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>11</td>
<td>15</td>
</tr>
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</table>

Table 3: Mode of Instruction – Student Enrolment

<table>
<thead>
<tr>
<th>Students</th>
<th>On Campus Programs</th>
<th>Distance Education Programs</th>
</tr>
</thead>
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<tr>
<td></td>
<td>Full time</td>
<td>Part time</td>
</tr>
<tr>
<td>Male</td>
<td>162</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>162</td>
<td></td>
</tr>
</tbody>
</table>

(Excluding preparatory program)

Note: FTE (full time equivalent) for part time students assume a full time load is 15 credit hours and divide the number of credit hours taken by each student by 15 (use this formula only for part time students).

Table 4: Mode of Instruction – Teaching Staff

<table>
<thead>
<tr>
<th>Number of Teaching Staff</th>
<th>On Campus Programs</th>
<th>Distance Education Programs</th>
</tr>
</thead>
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<td></td>
<td>Full time</td>
<td>Part time</td>
</tr>
<tr>
<td>Male</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

(Excluding preparatory program)

Note: Teaching staff is including tutors, lectures, and assistant, associate and full professors. This does not include research, teaching, or laboratory assistants. Academic staff who oversee the planning and delivery of teaching programs are included (e.g. head of department, dean for a college, rector and vice rectors).
C. Program Profile Data

Historical Summary

Provide a brief historical summary of the program including such things as:

- When and why was it introduced?
- Student enrolment history.
- Relationships with industry or professional advisory groups.
- Graduate employment outcomes.
- Major program changes.

Include brief comments about what are believed to be the programs main strengths and accomplishments and any significant problems or concerns that are being addressed.

Preparatory or Foundation Program

Do you offer a preparatory program? Yes
If yes, is the preparatory program is offered, is it out-sourced? Yes
If a preparatory or foundation year program is provided prior to entry to this program, are all students required to take that program? Yes
If yes, how many Academic credits are granted into the program and included in the * GPA

What is the total number of credits required by the program? 136

NOTE: * Credits granted into the program must be included in the GPA

List the courses that are granted into the program.
Table 5: 1\textsuperscript{st} level courses (pre-primary)

<table>
<thead>
<tr>
<th>Number, course code</th>
<th>Course name</th>
<th>Distribution of major units</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Theoretical</td>
<td>Exercises</td>
</tr>
<tr>
<td>PENG-111</td>
<td>English Language 1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>PMTH-112</td>
<td>Introduction to Mathematics 1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>PCOM-113</td>
<td>Computer Skills</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>PSSC-114</td>
<td>Communication and Education Skills</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total units</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6: 2\textsuperscript{nd} level courses (pre-primary)

<table>
<thead>
<tr>
<th>Number, course code</th>
<th>Course name</th>
<th>Distribution of major units</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Theoretical</td>
<td>Exercises</td>
</tr>
<tr>
<td>PENG-121</td>
<td>English Language 2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>PMTH-127</td>
<td>Introduction to Mathematics 2</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>PENG-123</td>
<td>English for engineering and scientific disciplines</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>PPHS-128</td>
<td>Physics</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total units</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 7: 3\textsuperscript{rd} level courses

<table>
<thead>
<tr>
<th>Number, course code</th>
<th>Course name</th>
<th>Distribution of major units</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Theoretical</td>
<td>Exercises</td>
</tr>
<tr>
<td>MATH- 231</td>
<td>Foundations of mathematics</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>STAT- 201</td>
<td>Statistics and probability</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>MATH- 201</td>
<td>Calculus (1)</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>MATH- 271</td>
<td>Introduction to Geometry</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>ARAB-101</td>
<td>Language Skills</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>SALM- 101</td>
<td>Islamic culture</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total units</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 8: 4\textsuperscript{th} level courses

<table>
<thead>
<tr>
<th>Number, course code</th>
<th>Course name</th>
<th>Distribution of major units</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Theoretical</td>
<td>Exercises</td>
</tr>
<tr>
<td>MATH- 202</td>
<td>Calculus (2)</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>MATH- 203</td>
<td>Calculus in several variables</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>MATH- 204</td>
<td>Vector Calculus</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Linear algebra (1)</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>University Elective</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total units</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 9: 5th level courses

<table>
<thead>
<tr>
<th>Number, course code</th>
<th>Course name</th>
<th>Distribution modules</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Theoretical</td>
<td>Exercises</td>
</tr>
<tr>
<td>MATH- 321</td>
<td>Introduction to Differential Equations</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>MATH- 351</td>
<td>Numerical analysis (1)</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>MATH- 352</td>
<td>Linear programming</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>MATH- 353</td>
<td>Mathematical applications in Computers</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>---</td>
<td>Department Elective</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>SALM- 10 2</td>
<td>Islam and society construction</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total units</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 10: 6th level courses

<table>
<thead>
<tr>
<th>Number, course code</th>
<th>Course name</th>
<th>Distribution modules</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Theoretical</td>
<td>Exercises</td>
</tr>
<tr>
<td>MATH- 322</td>
<td>Mathematical Methods</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>MATH- 342</td>
<td>Group Theory</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>STAT- 302</td>
<td>Statistics and probability (2)</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>MATH- 381</td>
<td>Real Analysis (1)</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Department Elective</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total units</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 11: 7th level courses

<table>
<thead>
<tr>
<th>Number, course code</th>
<th>Course name</th>
<th>Distribution modules</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Theoretical</td>
<td>Exercises</td>
</tr>
<tr>
<td>MATH- 423</td>
<td>Partial Differential Equations</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>MATH- 443</td>
<td>Rings and Fields</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>MATH- 472</td>
<td>Introduction to Topology</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>MATH- 473</td>
<td>Introduction to Differential Geometry</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>SALM- 103</td>
<td>Economic system in Islam</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Department Elective</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Field training</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total units</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 12: 8th Level

<table>
<thead>
<tr>
<th>Number, course code</th>
<th>Course name</th>
<th>Distribution modules</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Theoretical</td>
<td>Exercises</td>
</tr>
<tr>
<td></td>
<td>Department Elective</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>MATH- 483</td>
<td>Complex Analysis</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>MATH- 484</td>
<td>Introduction to functional analysis</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>University Elective</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Project</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Free course</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total units</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Statistical Summary

NOTE: FOR ALL TABLES IN THIS SECTION A SEPARATE TABLE MUST BE USED FOR EACH BRANCH/LOCATION CAMPUS.

Table 13: Student Enrolment

<table>
<thead>
<tr>
<th>Students</th>
<th>On Campus Programs</th>
<th>eLearning Education Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full time</td>
<td>Part time</td>
</tr>
<tr>
<td>Male</td>
<td>162</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>162</td>
<td></td>
</tr>
</tbody>
</table>

(Doesn’t include preparatory or foundation programs)

NOTE: To calculate effective full time equivalents (FTE) for part time students supposed to a notional full time load is 15 credit hours and divide the number of credit hours taken by each student by 15. (Use this formula only for part time students)

Table 14: Confirmed enrollment at the beginning of the current academic year

<table>
<thead>
<tr>
<th>Level/Year of Study</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year</td>
<td>39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second Year</td>
<td>37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third Year</td>
<td>61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fourth Year</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fifth Year (if applicable)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sixth Year (if applicable)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>162</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 15: No. of Staff

<table>
<thead>
<tr>
<th>No. of Staff</th>
<th>On Campus</th>
<th>eLearning Education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full time</td>
<td>Part time</td>
</tr>
<tr>
<td>Faculty</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Teaching staff</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

Faculty: FTE is calculated as 12 credit hours. The number should not include research, teaching or laboratory assistants.

NOTE: The number of faculty and teaching academic staff should include:

- Faculty: Assistant, Associate and Full Professors whether involved with teaching, research or both teaching and research.
- Teaching staff: Lectures, Teaching Assistants, Practical Preceptors
- The number should not include Technicians and Laboratory Assistants.
Table 16: Post-graduation and academic members.

<table>
<thead>
<tr>
<th></th>
<th>Ph.D.</th>
<th>Masters</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>No.</td>
<td>Percent</td>
<td>No.</td>
<td>Percent</td>
</tr>
<tr>
<td>Male</td>
<td>8</td>
<td>66%</td>
<td>4</td>
<td>33%</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>66%</td>
<td>4</td>
<td>33%</td>
</tr>
</tbody>
</table>

Average faculty workload and class enrollment

A. Calculate the average number of credit hours taught by the **full-time academic staff** for the last year and calculate the average number of students enrolled per class taught.

Table 17: No. of full-time faculty average credit workload

<table>
<thead>
<tr>
<th>Full-time Faculty</th>
<th>Average Credit Workload 1st Semester</th>
<th>Average Credit Workload 2nd Semester</th>
<th>Average Class Enrollment 1st Semester</th>
<th>Average Class Enrollment 2nd Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>14</td>
<td>12</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>12</td>
<td>17</td>
<td>15</td>
</tr>
</tbody>
</table>

Provide Analysis – Analyze the entire table and provide detailed class enrollment analysis of the different instructional levels.

1. Workload Analysis:
The workload of the faculty staff is ranging between 12 hours and 14 hours weekly which approaches the average work which is \((12+14)/2=13\) hours.

2. Class enrollment analysis:
The average of class enrollment is 16.

3. Class enrollment level analysis (Level means post or under graduate levels and year to year levels):
We have only under-graduate students and students in the first-term represent 14 % of the total number of students and about 22 % is the ratio of second year students.

Average credit workload – Add the total number of credit hours taught by each individual teaching faculty member, add them all together, and divided by the full-time or part-time number of faculty members.

Average class enrolment – Add the total number of students enrolled in all classes taught by each individual teaching faculty member and divide the total by the number of taught classes. Add all the totals together and divided by the total number of faculty members.
B. Calculate the average number of credit hours taught by the **part-time faculty** for the past year and calculate the average number of students enrolled per taught class.

### Table 18: No of part-time faculty

<table>
<thead>
<tr>
<th>Part-time Faculty</th>
<th>Average Credit Workload-1st Semester</th>
<th>Average Credit Workload-2nd Semester</th>
<th>Average Class Enrollment-1st Semester</th>
<th>Average Class Enrollment-2nd Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Provide Analysis – Analyze the entire table and provide detailed class enrollment analysis of the different instructional levels.

1. Workload analysis:
2. Class enrolment analysis:
3. Class enrolment level analysis (Level means post or under-graduate levels and year to year levels):

C. Calculate the average number of credit hours taught by the **full-time teaching staff** for the past year and calculate the average number of students enrolled per taught class.

### Table 19: No. of Full-time Teaching Staff

<table>
<thead>
<tr>
<th>Full-time Teaching Staff</th>
<th>Average Credit Workload-1st Semester</th>
<th>Average Credit Workload-2nd Semester</th>
<th>Average Class Enrollment-1st Semester</th>
<th>Average Class Enrollment-2nd Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>13</td>
<td>12</td>
<td>19</td>
<td>18</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>12</td>
<td>19</td>
<td>18</td>
</tr>
</tbody>
</table>

Provide analysis – Analyze the entire table and provide detailed class enrollment analysis of the different instructional levels.

1. Workload analysis:
The average workload is 12.5 hours per semester and the official teaching staff load is 18 hours.

2. Class enrolment analysis:

3. Class enrolment level analysis (Level means post or under-graduate levels and year to year levels):
D. Calculate the average number of credit hours taught by the **part-time teaching staff** for the past year and calculate the average number of students enrolled per taught class.

(No Part-time teaching staff is hired in the department)

<table>
<thead>
<tr>
<th>Part-time Teaching Staff</th>
<th>Average Credit Workload - 1st Semester</th>
<th>Average Credit Workload - 2nd Semester</th>
<th>Average Class Enrollment - 1st Semester</th>
<th>Average Class Enrollment - 2nd Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Provide Analysis – Analyze the entire table and provide enrollment detailed class analysis of all different instructional levels.

1. Workload Analysis:

2. Class enrolment analysis:

3. Class enrolment level analysis (Level means post or under-graduate levels and year to year levels):

---

**D. Self-Study Process**

Provide the following:

Provide a summary description of the procedures followed and administrative arrangements for the self-study.

Provide a quality assurance organization flowchart.

Describe membership and terms of reference for committees and/or working parties.

College of Science in Zulfi seeks to draw a road map to guide development in the college for the coming years inspired by the goals and objectives of the strategic plan of the college.

Since achieving accreditation was one of the main objectives of the College which began to develop a set of practical steps, procedures and administrative arrangements adopted in the implementation of the process of self-evaluation in accordance with the following procedures:

- The creation of the Development Agency and a Quality Unit at the College to take care of the themes of development and continuous assessment of the academic departments in the College. These include the Agency, the Development Unit, the unity of the quality and the integrity of electronic transactions, in addition to the formation of standing committees specialized in how to develop the quality within the committees of the three departments in the College.
Self-Study Report

-A committee was formed for the quality and the commission to oversee the College level. The College seeks to unify and integrate efforts with respect to the integration of all academic departments. Particularly, regarding quality and academic accreditation.

-Took over the agency 's overall responsibility for the development and supervision of the quality Calendar developmental process in the various departments of the college to apply for the adoption of the Academy.

Here are the steps that have been followed in the process of self-evaluation:

1- The announcements of the project accreditation start. Initially, it was announced at the college and the various departments for the start of work on a self-study report and the distribution of the number of files in Arabic language and a set of files in English, in which they include a description of required steps to fill out a form measures of self-evaluation and prepare a self-study report, as well as collecting and providing evidence and documents required.

E. Mission, Goals and Objectives

1. Mission Statement of the program (Insert the Mission statement).

Mission: Providing graduates with skills to be able to communicate with outside Society and contribute to this society; obtaining information to critically assess numerical and graphical solutions; learning to formulate strategies for solving problems; acknowledging the importance of being intellectually curious throughout their long lives, pursuing their postgraduate interests, including graduate study, teaching, and private or government employment.

Use the following table and write clear, measurable goals and objectives of the program and align each one with quality performance indicators and the target benchmark.

NOTE: A SEPARATE TABLE MUST BE USED FOR EACH BRANCH/LLOCATION CAMPUS (This table is not referring to NCAAA KPIs or the program KPIs).

<table>
<thead>
<tr>
<th>Goals</th>
<th>Objectives</th>
<th>Performance Indicators</th>
<th>Target Benchmarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduates will be able: Explain and deliver professionally the most complicated Mathematical Basis and ideas orally and in writing with ethical responsibility.</td>
<td>Graduates will be able: Apply various general education competencies through the study of Mathematics.</td>
<td>1- Ability to identify and solve relevant mathematical, and to explore formulations and solutions using alternative approaches 2- Preparing reports and oral presentation 3- Thinks holistically: sees the whole as well as the parts Supports design</td>
<td></td>
</tr>
</tbody>
</table>

Mathematics Department 19 Zulfi, Faculty of Sciences
| Graduates will be able: | 1. Techniques and skills (such as modeling, simulation, experimentation, measurement and data analysis)  
2. Research and gather information  
3. Use of computers |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Explain Mathematical ideas with professional and ethical responsibilities | 1. Understanding of ethical responsibility  
2. Understanding of professional responsibility |
| Compete in the job Market or secure acceptance in Postgraduate studies in Mathematics. | 1. Write technical report and deliver oral presentation  
2. Reading of technical magazines, Journals, and research articles |
| Transmit Mathematical ideas both orally and in writing |  |
| Work effectively individually and within a team. |  |

Provide a list of the strengths and recommendations for improvement based on an assessment of this data.

**GOALS** refer to the major program aims, ambitions, and purposes (What the program is attempting to accomplish?)

**OBJECTIVES** refer to specific action points the program has in place to achieve each goal (How is the program attempting to accomplish the goals).

**PERFORMANCE INDICATORS** refer to the measurement criteria used to evaluate each objective.

**TARGET BENCHMARK** refers to the intended or desired outcome that is anticipated when each goal is complete.

**SUMMARY ANALYSIS** refers to a study compare to all target benchmarks with the actual outcomes determined by the performance indicators (Examine all the goals together and compare and contrast the expected target results with the actual results provided by the performance indicators.). The summary analysis is an overall assessment of the success that achieves the program goals.

2. **Program Evaluation in Relation to Goals and Objectives for Development of the Program.**

**NOTE:**
1. State goal/objective

**Goal 1:** Explain and deliver professionally the most complicated Mathematical concepts and ideas orally and in writing with ethical responsibilities.

**Obj.1:** Graduates will be able to Apply various general education competencies through the study of Mathematics.

**Obj.3:** Graduates will be able to Explain Mathematical ideas with professional and ethical responsibilities

Target benchmark or standard of performance

Result achieved or actual benchmark

Comments and analysis

2. State goal/objective

**Goal 2:** Have the best positions and opportunity in job market, as well as, get admissions in the quality schools for higher educations

**Obj.2:** Graduates will be able to Compete in the job Market or secure acceptance in Postgraduate studies in Mathematics.

**Obj.4:** Graduates will be able to Transmit Mathematical ideas both orally and in writing

**Obj.5:** Graduates will be able to Work effectively individually and within a team.

Target benchmark or standard of performance

Result achieved or actual benchmark

Comments and analysis

2- Formation of committees at the College’s levels and sections:

Committees have been formed at the college level and at the district level to accomplish the tasks associated with a project of academic accreditation in every department of the College, and in coordination with the various committees of the College, as shown in the following figure:
Table 20: Members of the Quality & Accreditation Unit

<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Degree</th>
<th>Adjective</th>
<th>Mobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dr. Ahmed Mohamed Elmoasry</td>
<td>Assistant Professor</td>
<td>Chairman of Committee</td>
<td>0589232237</td>
</tr>
<tr>
<td>2</td>
<td>Prof. Dr. Mohamed Abdel-Hakim Ahmed</td>
<td>Professor</td>
<td>Commission Agent</td>
<td>0595871149</td>
</tr>
<tr>
<td>3</td>
<td>Dr. Ahmed Abdullah Zedan</td>
<td>Assistant Professor</td>
<td>Member</td>
<td>0534718192</td>
</tr>
<tr>
<td>4</td>
<td>Mr. Kamal Nazmi</td>
<td>Lecturer</td>
<td>Member</td>
<td>0507259630</td>
</tr>
<tr>
<td>5</td>
<td>Mr. Abdulla Wadeed Alseqaana</td>
<td>Student</td>
<td>Member</td>
<td>0532999553</td>
</tr>
<tr>
<td>6</td>
<td>Mr. Ahmed Abdel-Mohsen</td>
<td>Student</td>
<td>Member</td>
<td>0531590994</td>
</tr>
</tbody>
</table>

Table 21: Table 16: The work teams to verify the eleven standard of NACCC

<table>
<thead>
<tr>
<th>Name of Member</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Omer Khalil</td>
<td>Institutional context</td>
</tr>
<tr>
<td>Dr. Farooq Ahmed</td>
<td>• Mission and Objectives</td>
</tr>
<tr>
<td>Dr. Mohamed Ramzan</td>
<td>• Program Administration</td>
</tr>
<tr>
<td>Dr. Jawdet Elbraheem</td>
<td>• Quality Management &amp; Improvement</td>
</tr>
<tr>
<td>Dr. Mohamed Omar Mahjoub</td>
<td>Quality of learning and teaching process</td>
</tr>
<tr>
<td>Dr. Naveed Yaqoob</td>
<td>• Learning and Teaching</td>
</tr>
<tr>
<td>Prof. Dr. Mohammed Abdulhakeem</td>
<td>Students Learning support</td>
</tr>
<tr>
<td>Dr. Wasseim ElHaq</td>
<td>Student Activities</td>
</tr>
<tr>
<td>Dr. Abdallah Abduljabbar</td>
<td>Learning Resources</td>
</tr>
<tr>
<td>Dr. Khaled ElHelw</td>
<td></td>
</tr>
<tr>
<td>Dr. Rabeh Kalil</td>
<td>Infrastructure services support</td>
</tr>
<tr>
<td>Dr. Abdullah Abduljabbar</td>
<td>Facilities and Equipment</td>
</tr>
<tr>
<td>Dr. Mohamed Khalaf</td>
<td>Management</td>
</tr>
<tr>
<td>Dr. Sijaad Hussuin</td>
<td>Employment Processes</td>
</tr>
<tr>
<td>Dr. Sijaad Hussuin</td>
<td>Community service</td>
</tr>
<tr>
<td></td>
<td>Scientific research</td>
</tr>
<tr>
<td></td>
<td>Community Relations</td>
</tr>
</tbody>
</table>
Figure 1: College of Science - Quality Management system (QMS)
F. Program Context

1. Describe the significant elements in the external environment (including any important recent changes)

2. Enrolment management and cohort analysis (complete tables on the following pages)

**Cohort Analysis** refers to track a specific group of students who begin a given year in a program and following them until they graduate (How many students actually start a program and stay in the program until completion?).

A **cohort** refers to the total number of students enrolled in the program at the beginning of each academic year, immediately after the preparatory year. No new students may be added or transfer into a given cohort. Any students that withdraw from a cohort may not return or be added again to the cohort.

**Cohort Analysis Table 1:** provides complete tracking information for the most recent cohort to complete the program, beginning with their first year and tracking them until graduation (students that withdraw are subtracted and no new students are added).

**Cohort of the Academic Year:** tables refer to current cohort tracking that is in progress. A separate cohort tracking table should be provided for each year.

3. Analyze the mission, goals, content, and methods to the delivery of the program and describe any implications for changes that may be required as a result of changes noted under 1 and 2.

---

NOTE: A SEPARATE TABLE MUST BE USED FOR EACH BRANCH/LOCATION CAMPUS.

Table 22: Enrollment Management and Cohort Analysis

<table>
<thead>
<tr>
<th>Student Category</th>
<th>2012 - 13</th>
<th>2013 - 14</th>
<th>2014 - 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total cohort enrollment</td>
<td>88</td>
<td>65</td>
<td>80</td>
</tr>
<tr>
<td>Retained till year end</td>
<td>10</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Withdrawn during the year and re-enrolled the following year</td>
<td>54</td>
<td>23</td>
<td>4</td>
</tr>
<tr>
<td>Graduated successfully</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* PYP - Preparatory Year Program

Provide a Cohort Analysis of the Academic Years: 2008 – 2011

G. Program Developments

1. Provide a list of changes made in the program in the period since the previous self-study or since the program was introduced. This should include such things as courses added or deleted or significant changes in their content, changes in approaches to teaching or student assessment, or program evaluation processes etc.
2. Comparison between planned and actual enrollment.

Table 23: Comparison between planned and actual enrollments

<table>
<thead>
<tr>
<th>Year</th>
<th>Planned Enrollment</th>
<th>Actual Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-11</td>
<td>100</td>
<td>41</td>
</tr>
<tr>
<td>2011-12</td>
<td>100</td>
<td>45</td>
</tr>
<tr>
<td>2012-13</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>2013-14</td>
<td>100</td>
<td>56</td>
</tr>
<tr>
<td>2014-15</td>
<td>100</td>
<td>57</td>
</tr>
<tr>
<td>2015-16</td>
<td>100</td>
<td>52</td>
</tr>
</tbody>
</table>

Provide analysis and an explanation report if there are significant differences between planned and actual numbers.

H. Evaluation in Relation to Quality Standards

(Refer to Standards for Quality Assurance and Accreditation of Higher Education Programs)

NOTE FOR SECTION H

Response reports should be provided under each of the quality sub-standards set out in the Standards for Quality Assurance and Accreditation of Higher Education Programs.

- To ensure that full understanding of the SSRP’s explanatory reports are included in order to give background information or explanations of processes relevant to the standard or sub-standard concerns.
- Reports should summarize the process followed by an investigation of the performance in relation to each standard and sub-standard.
- A vital element of the SSRP is to provide specific data, show trends, support conclusions, and make appropriate comparisons with other programs selected to provide benchmarks for evaluation of performance. This data may include key performance indicators, other statistical information, figures derived from survey results, student results or anything that provides clear evidence about the matter being evaluated. A simple assertion that something is good, or needs improvement, is not sufficient without evidence to back it up.
- Integrated into this SSRP are KPI tables for measurement of quality. Each KPI table is placed at a specific point where quality assurance must be demonstrated. Programs may use NCAAA KPIs or develop their own KPIs to complete them.

NOTE: Programs are required to use 50% or more of the suggested NCAAA KPI’s.

While taking into account the distribution of tasks which has been done to involve all members of the faculty, staff and students, and the number of disciplines which are taken into account of the experience and different degrees for each faculty member.

Gathering information and evidence:

A committee was formed for the adoption and quality of coordination between different departments in terms of providing the necessary data, evidence and indicators related to the model standards of self-evaluation as well as the self-study report for the program in each section separately.
The teams work in the department filling out a form of self-evaluation standards in the special part of the criteria that is specific to each committee, and has filed a form with the report on the work done and the most important strengths and weaknesses of the aspects covered by the standards. It also has provided an illustrative description of the procedures concerning the standards of the reality of what is actually in the department. It was then dumped the different models independently to provide the necessary data for the preparation of self-study report.

3- Writing self-study report:

The plan has been prepared for the improvement and development of the program based on the findings and recommendations of the self-evaluation, the plan includes a clear definition of the steps and the tasks you want to work, and members of the department officials reported, at the time for completion. It will be the follow-up implementation plan and review its progress regularly in the department in line with the recommendations of the report.

Key Performance Indicators (KPI)

(Please state indicators and standards of excellence that have been selected to represent the evidence on the quality of the program or to achieve the objectives of the program towards the development).

Table 24: Key Performance Indicators (KPI)

<table>
<thead>
<tr>
<th>Standard</th>
<th>Key Performance Indicators (KPI)</th>
<th>The level of Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - Mission and</td>
<td>Views that were obtained by asking members for their opinion in the message. The extent of fitness of the message with the needs and aspirations of society. Members and decision-makers about the usefulness of the program ‘message statement’ to the decision-making process. Awareness of faculty and staff program, about program mission and support it. Proportion of the important decisions that are made by reference to the message. Contain criteria to evaluate all proposals of the establishment courses and paragraph states that agree with the proposed decision and created message program.</td>
<td>Program, College, Institution</td>
</tr>
<tr>
<td>Goals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 - Power management</td>
<td>Members’ opinion about the supreme authority in the effectiveness of the Council (or administration), regarding the development of public policy for the program and supervision, and the extent of their understanding of the strategies needed to achieve the goals, and the extent of convergence of opinion between the various groups that make up the Board of Directors. The presence of self-examination reports issued by the management of the program, and the main administrative committees, where the decline in performance, which plans to improve this performance.</td>
<td>Program, College, Institution</td>
</tr>
</tbody>
</table>
Meeting schedule forms, securities, minutes of meetings and private management which can show a clear focus on issues and strategy, or absence of this focus. The extent of achievement of the objectives set out in the annual work plans. Contain the job descriptions or the power of the committees on the main mechanisms which are responsible for and clear accountability, as well as, clear mechanisms to assess performance.

Number of times in which a section to notify all employees by the developments in the section, and topics that interest section attached at the moment.

Responses of the members of the faculty and staff at the department questionnaires about the things that tell them by section, showing awareness of developments in the section, and issues that interest attaches section, also indicate whether they themselves are interested in these things already.

The extent to which the department faculty and staff and students by the existence of rules and policies related to them, and affect them and the extent of their knowledge of these rules.

Replies program faculty and staff at the polls for the climate section.

<table>
<thead>
<tr>
<th>3- Quality assurance Management and improvement</th>
<th>Program, College, Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - Overall rating of the quality of student learning experiences in the organization (the median estimate of students on a scale annual appreciation of five points for the final year students)</td>
<td>Program, College, Institution</td>
</tr>
<tr>
<td>2 - the proportion of studying courses in which the students take during the calendar year</td>
<td>Program, College, Institution</td>
</tr>
<tr>
<td>3 - the proportion of the programs that ratification by the independent standards (levels) student achievement during the year by people from within the organization</td>
<td>Program, College, Institution</td>
</tr>
<tr>
<td>4 - the proportion of the programs that ratification by the independent standards (levels) student achievement during the year by people outside the organization</td>
<td>Program, College, Institution</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4 - Learning and Teaching</th>
<th>Program, College, Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 - The ratio of students to faculty (full-time or equivalent)</td>
<td>Program, College, Institution</td>
</tr>
<tr>
<td>6 - Determination of students overall quality courses (average estimate of my students on a scale of five points for the overall evaluation of the decisions)</td>
<td>Program, College, Institution</td>
</tr>
<tr>
<td>7 - the proportion of faculty who hold doctorate qualifications validated</td>
<td>Program, College, Institution</td>
</tr>
<tr>
<td>8 - the percentage of students entering programs who have successfully completed the first year</td>
<td>Program, College, Institution</td>
</tr>
<tr>
<td>9 - the percentage of students in undergraduate programs entrants who have completed the minimum period</td>
<td>Program, College, Institution</td>
</tr>
<tr>
<td>10 - percentage of students entering graduate programs who have completed on time</td>
<td>Program, College, Institution</td>
</tr>
<tr>
<td>11 - percentage of graduates from undergraduate programs who are in a period of 6 months of graduation:</td>
<td>Program, College, Institution</td>
</tr>
<tr>
<td>A - Employ</td>
<td></td>
</tr>
<tr>
<td>b - enrolled in the study</td>
<td></td>
</tr>
</tbody>
</table>
### Key Performance Indicators:

1. Overall rating of the quality of the program to students and courses.
2. The proportion of courses in which the students take during the calendar year.
3. The degree of overall evaluation of the program by self-residents from within the program.
4. Ratio of students to faculty members (full-time or equivalent)
5. The proportion of faculty who hold doctorate qualifications validated
6. The percentage of students who completed the program successfully completed the first year
7. The proportion of graduates of the total admitted and enrolled in the program
8. The opinion of the students in the quality and relevance of teaching methods.
9. The opinion of the faculty members in the quality and relevance of teaching methods
10. The opinion of independent evaluators in the quality and relevance of teaching methods.
11. The proportion of graduates runs through recruitment or register to graduate.
12. Satisfaction rate employers for graduates of the program.
13. The extent of absorption of the program of the variables affecting it.
14. The proportion of faculty members enrolled in training courses required by the program.
15. The rate and diversity of media and teaching strategies used by faculty members.
16. The number of hours of hands-on training provided by the program.
17. Appropriateness of teaching methods as evaluated by students.
18. The number of courses offered to faculty members in the school year.
19. Statistical research, seminars and conferences for members of the faculty.
20. Participation rate of faculty members in seminars and meetings related to the latest developments in the specialty.
21. The proportion of faculty members who have qualified PhD who assume teaching in the program.
22. The number of students enrolled in the training courses.
23. The rate of diversity in the methods of evaluation in the current school year.
24. Questionnaires distributed to students, graduates and employers.
25. Responsiveness to students’ opinions and suggestions in the evaluation of courses.
26. The extent of the response to the opinions and suggestions of graduates in the evaluation of the program.
27. The extent of the response to the views of employers and suggestions in the evaluation of program outputs.

Standard 1. Mission Goals and Objectives (Overall Rating: ****)
Effective and coordinated planning and development normally requires that a program have a succinct mission statement, summarizing in a few sentences what it is trying to achieve as a guide to detailed planning and development.

We must consider the following when preparing the mission:

1- The mission statement should establish priorities for development and quality improvement and be key element in the quality assurance process.
2- It should be prepared in a way that generates a sense of ownership on the part of all those involved with the program.

3- It should be consistent with the charter establishing the institution, and realistic in relation to the capacity of the institution in the environment within which it is operating, but at the same time present challenges for development and improvement.

4- It should be periodically reviewed as a major policy issue, and consistently referred to as a basis for planning and evaluation.

5- Goals should be thought of as applications of the mission to specific activities.

6- Objectives should be linked through strategic planning processes to the mission and goals

7- It should be more specific and include intended results to be achieved within a stated time period.

This standard relates to the way the mission statement has been developed and is expressed, to its effectiveness in guiding the development of the program, and to the relationships between the mission and the goals and objectives.

The mission of the program must be consistent with that for the institution and apply that mission to the particular goals and requirements of the program concerned. It must clearly and appropriately define the programs principal purposes and priorities and be influential in guiding planning and action.

The following are the views of a group of faculty members and students about the basic components of this standard.

1.1 Appropriateness of the Mission

Table 25: Appropriateness of the Mission

<table>
<thead>
<tr>
<th>Standard</th>
<th>Is this true?</th>
<th>How well is this done? (enter stars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.1 The mission for the program is consistent with the mission of the institution.</td>
<td>Y</td>
<td>*****</td>
</tr>
<tr>
<td>1.1.2 The mission establishes directions for the development of the program that are appropriate for a program of its type and for the needs of students in the context for which they are prepared.</td>
<td>Y</td>
<td>****</td>
</tr>
<tr>
<td>1.1.3 The mission statement is consistent with Islamic beliefs and values.</td>
<td>Y</td>
<td>*****</td>
</tr>
<tr>
<td>1.1.4 The appropriateness of the mission is explained to stakeholders in an accompanying statement commenting on significant aspects of the environment within which it operates. (which</td>
<td>Y</td>
<td>****</td>
</tr>
</tbody>
</table>
Self-Study Report

may relate to local, national or international issues)

Overall Assessment

Questionnaire was conducted on a group of faculty members (20) and students (37) about: The mission statement establishes directions for the development of the program that are appropriate for a program of its type and for the needs of students in Saudi Arabia, and the results were as follows:

Table 26: Appropriateness of the Mission

<table>
<thead>
<tr>
<th>Appropriateness of the Mission</th>
<th>Stuff</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>29%</td>
<td>28%</td>
</tr>
<tr>
<td>Agree</td>
<td>55%</td>
<td>46%</td>
</tr>
<tr>
<td>True to some extent</td>
<td>15%</td>
<td>21%</td>
</tr>
<tr>
<td>Disagree</td>
<td>1%</td>
<td>5%</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Figure 2: Appropriateness of the Mission

Remarks:

It is noticed that, the majority of members and students believe that the mission of the program is suitable for the institution and the nature of the programs of this kind in the Kingdom of Saudi Arabia.

1.2 Usefulness of the Mission Statement

<table>
<thead>
<tr>
<th>1.2.1 The mission statement is sufficiently specific to provide an effective guide to decision-making and choices among alternative planning strategies.</th>
<th>Is this true? Y/No/NA</th>
<th>How well is this done? (enter stars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>*****</td>
<td></td>
</tr>
</tbody>
</table>
The mission is achievable through effective strategies within the level of resources expected to be available. **Y ****

The mission statement provides clear criteria for evaluation of progress towards the goals and objectives of the program. **Y *****

Overall Assessment *****

Questionnaire was conducted on a group of faculty members (20) and students (37) about: The mission statement is specific enough to guide to decision-making and choices among alternative planning strategies. The results were as follows:

Table 27: Usefulness of the Mission Statement

<table>
<thead>
<tr>
<th>Usefulness of the Mission Statement</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>True to some extent</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stuff</td>
<td>18%</td>
<td>52%</td>
<td>27%</td>
<td>3%</td>
<td>0%</td>
</tr>
<tr>
<td>Students</td>
<td>23%</td>
<td>44%</td>
<td>24%</td>
<td>7%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Table 28: Usefulness of the Mission Statement

<table>
<thead>
<tr>
<th>Usefulness of the Mission Statement</th>
<th>Stuff</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>18%</td>
<td>23%</td>
</tr>
<tr>
<td>Agree</td>
<td>52%</td>
<td>44%</td>
</tr>
<tr>
<td>True to some extent</td>
<td>27%</td>
<td>24%</td>
</tr>
<tr>
<td>Disagree</td>
<td>3%</td>
<td>7%</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>0%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Figure 3: Usefulness of the Mission Statement

Remarks:
It is noticed that, nearly 70% of the members and students believe that the mission statement is useful in directing the planning and decision-making related to the program.

### 1.3 Development and Review of the Mission

<table>
<thead>
<tr>
<th>Standard</th>
<th>Is this true?</th>
<th>How well is this done?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major stakeholders associated with the program have been consulted and support the mission.</td>
<td>Y</td>
<td>*****</td>
</tr>
<tr>
<td>The decision making body responsible for approving the program within the institution formally approved the mission statement.</td>
<td>Y</td>
<td>****</td>
</tr>
<tr>
<td>The mission statement is periodically reaffirmed or amended if necessary in the light of changing circumstances.</td>
<td>Y</td>
<td>****</td>
</tr>
<tr>
<td>Stakeholders are kept informed about the mission and any changes made in it.</td>
<td>Y</td>
<td>****</td>
</tr>
</tbody>
</table>

**Overall Assessment**

1.

**Comment:**

The strategy committee reviews the mission and goals when they construct the strategy plan.

**Priorities for improvement:**

A clear mechanism is required for keeping beneficiaries informed of the program mission and goals and informing them of possible changes or amendments.

Questionnaire was conducted on a group of faculty members (20) and students (37) about: Major stakeholders associated with the program have been consulted and support the mission and The mission statement is periodically reaffirmed or amended if necessary in the light of changing circumstances. The results were as follows:

**Table 29: Development and Review of the Mission**

<table>
<thead>
<tr>
<th>Development and Review of the Mission</th>
<th>Stuff</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>17%</td>
<td>22%</td>
</tr>
<tr>
<td>Agree</td>
<td>45%</td>
<td>33%</td>
</tr>
<tr>
<td>True to some extent</td>
<td>33%</td>
<td>28%</td>
</tr>
<tr>
<td>Disagree</td>
<td>1%</td>
<td>9%</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>0%</td>
<td>8%</td>
</tr>
</tbody>
</table>
**Figure 4: Development and Review of the Mission**

**Remarks:**

It is noted that about 60% of the members and students believe that the mission of the program has been put through consultative processes, with the need for formal adoption by the relevant authority within the institution.

### 1.4 Use Made of the Mission Statement

<table>
<thead>
<tr>
<th>Standard</th>
<th>Is this true? Y/No/NA</th>
<th>How well is this done? (enter stars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.4.1 The mission statement is used as a basis for a strategic plan for development of the program over a medium term planning period. (normally five to seven years)</td>
<td>Y</td>
<td>*****</td>
</tr>
<tr>
<td>1.4.2 The mission statement is known about and supported by teaching and other staff and students.</td>
<td>Y</td>
<td>****</td>
</tr>
<tr>
<td>1.4.3 Consistency with the mission is listed among criteria for consideration of program and project proposals by committees and decision makers.</td>
<td>Y</td>
<td>****</td>
</tr>
<tr>
<td>Overall Assessment</td>
<td></td>
<td>****</td>
</tr>
</tbody>
</table>

**Comment:**

Use of the mission as a guide for the distribution of resources and decision-making related to projects need to be improved.

Questionnaire was conducted on a group of faculty members (20) and students (37) about: The mission statement is used as a basis for a strategic plan for development of the program over a medium term planning period. The results were as follows:
Table 30: Use Made of the Mission Statement

<table>
<thead>
<tr>
<th>Use Made of the Mission Statement</th>
<th>Stuff</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>29%</td>
<td>15%</td>
</tr>
<tr>
<td>Agree</td>
<td>55%</td>
<td>38%</td>
</tr>
<tr>
<td>True to some extent</td>
<td>15%</td>
<td>33%</td>
</tr>
<tr>
<td>Disagree</td>
<td>1%</td>
<td>10%</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>0%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Figure 5: Use Made of the Mission Statement

Remarks:

It is noted that about 84% of the members believe that the mission statement is used as a basis for a strategic plan for development of the program over a medium term planning period, while 53% of the students do so. This discrepancy between the ratios of members and students due to the presence of members near the decision-making circles other than the students.

1.5 Relationship between Mission, Goals and Objectives

<table>
<thead>
<tr>
<th>Standard</th>
<th>Is this true?</th>
<th>How well is this done? (enter stars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5.1 Goals for development of the program are consistent with and support the mission.</td>
<td>Y</td>
<td>*****</td>
</tr>
<tr>
<td>1.5.2 Goals are stated with sufficient clarity to effectively guide planning and decision-making in ways that are consistent with the mission.</td>
<td>Y</td>
<td>*****</td>
</tr>
<tr>
<td>1.5.3 Goals and objectives for the development of the program are reviewed periodically and modified if necessary in response to results achieved and changing circumstances.</td>
<td>Y</td>
<td>*****</td>
</tr>
</tbody>
</table>
1.5.4 Statements of major objectives should be accompanied by specification of clearly defined and measurable indicators that are used to judge the extent to which objectives are being achieved.

Y ******

Overall Assessment ******

Questionnaire was conducted on a group of faculty members (20) and students (37) about: Goals are stated with sufficient clarity to effectively guide planning and decision-making in ways that are consistent with the mission. The results were as follows:

Table 31: Development and Review of the Mission

<table>
<thead>
<tr>
<th>Development and Review of the Mission</th>
<th>Stuff</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>13%</td>
<td>22%</td>
</tr>
<tr>
<td>Agree</td>
<td>61%</td>
<td>40%</td>
</tr>
<tr>
<td>True to some extent</td>
<td>24%</td>
<td>22%</td>
</tr>
<tr>
<td>Disagree</td>
<td>1%</td>
<td>11%</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>1%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Figure 6: Development and Review of the Mission

Remarks:

It is noted that 74% of members believe that the message of the program is used to guide the development of program goals, objectives and strategic plans to develop it, while 66% of the students do so. This discrepancy between the ratios of members and students due to lack of involvement of students in such practices.

Overall Assessment of Mission Goals and Objectives
Self-Study Report

1.1 Appropriateness of the Mission

1.2 Usefulness of the Mission Statement

1.3 Processes of Development and Review of the Mission

1.4 Use made of Mission Statement

1.5 Relationship Between Mission, Goals and Objectives

Combined Assessment

Points of Strength:

1. The program mission is consistent with the educational mission of the institution.
2. Consistent mission format with Islamic beliefs and values.
3. The program was adopted officially by the relevant authority within the organization.
4. The program mission statement clearly and appropriately defines its principal purposes and priorities and is influential in guiding planning and action within the program.
5. In planning its first mission and strategies, program sought international help and also helps from its various constituents.

Points need to be improved:

1. It is noted that the program mission suitable for the educational institution and the nature of the programs of this kind in the Kingdom of Saudi Arabia by more than 80%.
2. It is noted that the formula (definition) useful mission in the planning and decision-making related to the program by directing high.
3. There is still a weakness in the communication between the authors of the program and its beneficiary's mission.

Priorities for improvement:

1. Working on the completion of the program suitable mission of the educational institution.
2. Mission should be in a new format and clear to all beneficiaries of the program and through the development of a viable strategy and serve the community.
3. Must have communication between the authors of the program and its beneficiary's mission.

Standard 2. Program Administration (Overall Rating: ****)

Program administration must provide effective leadership and reflect an appropriate balance between accountability to senior management and governing board of the
institution within which the program is offered, and flexibility to meet the specific requirements of the program concerned. Planning processes must involve stakeholders (e.g. students, professional bodies and faculty) in establishing goals and objectives and reviewing and responding to results achieved. If a program is offered in sections for male and female students resources for the program must be comparable in both sections and there must be effective communication between them and equitable involvement in planning processes. The quality of delivery of courses and the program as a whole must be regularly monitored with adjustments made promptly in response to this feedback and developments in the external environment affecting the program.

1. Explanatory note about program administration arrangements

The program administration starts at the level of Board of college which carries the responsibilities, has the legal authority and includes the department heads. The Dean has the responsibility of handling administration cycle inside the college and departments. The covering laws and rules are stated in the higher education laws manual.

The department is led by the head of the department and usually the program is chaired by a well-qualified senior member of faculty who usually has a good experience in administration. He is supported by the 3 departmental assigned committees as in the internal Quality Management System, and other committees when needed, which are dealing with different matters of administration and academic issues.

The assignment of these committees aims to involve all faculty members in running the department and share them in the decision-making process. These committees are dealing with different matters of administration and academic issues (e.g. teaching load, staff promotion, postgraduate and research Affairs, Society affairs, Laboratories and equipment’s facilities, Quality Assurance and Accreditation). Different members of the committees look at the matters in their domain and see if the program is working effectively and report the shortcomings and advice on methods of improvement to the staff council. These matters are then looked into and appropriate
actions are taken. Quality Management System shows the responsibilities of each committee.

In addition, there is a program coordinator who assigned by the Department council and is responsible to coordinate and facilitate the teaching and learning matters of Mathematics Program. The standard criteria for choosing the coordinator are based mainly on being an acting staff with good reputation and experience in the quality assurance and accreditation field.

The program coordinator represents the program and the department in the college Quality Assurance unit, and he is responsible for coordination between the department and the Quality Assurance unit and Faculty administration in developing and implementation of quality strategy, follow up how the mission and objective of the program are achieved and supervising the preparation of the annual self-evaluation report.

According to Quality Management System approved by the College council, the head of the department and the Steering Committee carry the responsibility to perform the following:

- Interviewing samples of faculty members and employees.
- Examining the records and reports for related events and committees, the Colleges Annual Report 2012- 2013 and job descriptions.
- Examining University and College Strategic Plan.
- Examining samples of documents from departments (committee minutes, decisions, missions and goals, plans, etc.) and data available at the college website.
- Completing self-evaluation scales based on results of indicators and information available, and identifying strengths, weaknesses, and priorities for improvement.
- Referring to the report and suggested action plan of the external reviewers, and responding to their recommendations.
- Writing a first draft of SSR
- Discussing the drafted of the SSR in the department meeting, modifying it as required and approves the last version.
Use of evidence

1) Administrative organizational charts.
2) Job description of administrative personnel.
3) Policies, laws, rules and regulations of different sectors/situations which are available on the University/College websites.
4) CV’s of senior management personnel available at the University websites.
5) Annual Institutional report of achievements in administration, teaching, research and community service.
6) Surveys conducted to record views and good practice in governance and administration.
7) Documents of the Skills Development Deanship showing workshops for senior managers and number of managers attending the events.
8) The extent to which objectives set in annual operating plans are achieved.

Key Performance Indicators considered

- Number of professional development activities attended by leadership and management.
- The average ratings of staff to the following questions in staff satisfaction survey
  i. The administration is understanding and cooperative.
  ii. I can easily reach the administration.
  iii. The head of my department is understanding and cooperative.
  iv. I can easily reach the head of my department.

2. Report on subsections of the standard

Refer to evidence obtained about the subsections of the standard and provide a report including a summary of particular strengths, areas requiring improvement, and priorities for action

2.1 Leadership

Formal appointment procedures, through nomination, have been initiated by the University Rector for Deans and heads of department, a procedure to delegate authority at all levels has been approved, and management responsibilities, which are
listed in a detailed guidebook, are clear to all Deans and heads of department (Annex G2.2.1: Policy of Deans' and Department chairmen Nomination Committee).

The new appointment policy involves the following: the Head of the Department of Mathematics is nominated by the Department’s Council; acting on the Council’s authority, the Head of the Department has responsibility for the educational, financial and administrative activities of the Department and also ensures that the Department’s functions take place according to policies and regulations established by Majmaah University, College of Science and Department of Mathematics (Annex G2.2.2: Job descriptions and duties of the Dean, Vice deans and Head of the department). The Department’s needs and concerns are passed on to the Council by the Head while the Chair provides facilitative Program and curriculum planning, as well as monitoring quality.

The Council is leaded by the governing board of the Department and comprises faculty members and the Head of the Department; it makes sure that the Head has the decision-making authority required to lead the Department in achieving its mission and was instrumental in the Department functioning smoothly during the two-year transition period between Heads of the Department. It has responsibility for making key decisions on issues put before it by standing committees, changes in policy, specific student-based issues, and business related to the academic running of the Department. The Chair is responsible for leading on and managing all matters relating to the Program with the help of the standing committees; a description of the duties and responsibilities of each committee are clear but the Head of the Department can form other, ad hoc committees as necessary to deal with temporary matters of nature. Various issues can be delegated by the Chair to the relevant standing committee which meets and then takes action or makes recommendations, which are discussed in the Council; these are reported to the Dean and the College Board for approval.

The Department’s Council meets at least twice a month. However, if there is an urgent problem, a special meeting is arranged. The Council discusses and resolves matters brought to its attention and procedures, such as reporting systems, valuation
and review processes, and appeal and grievance procedures, exist to ensure internal accountability.

The Department of Mathematics attempts to involve all faculty members in the Department’s governance and the most important mechanisms to ensure this there are the Department Council and departmental committees. It is planned to extend this shared governance to include external communities which will be charged with identifying important issues, especially in terms of opportunities and threats. The Department Advisory Board and the Alumni Board constitute mechanisms which allow the involvement of external communities.

A survey was conducted at the beginning of the academic year 1433/1434H to measure faculty members' satisfaction. Results as shown on Figure 13 and figure 14, that the majority of faculty members with a mean of 93% stated that they can easily reach the head of the department, and believe that the head of the department is understanding and cooperative. Furthermore, the data analysis show that most faculty with mean 100% that they can easily reach the administration.

**Table 32: Permanent help and support**

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>True for some extent</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>45%</td>
<td>32%</td>
<td>6%</td>
<td>7%</td>
</tr>
</tbody>
</table>

**Figure 7: Permanent help and support**

**Table 33: permanent and easy communication with the program management**

<table>
<thead>
<tr>
<th>Strongly agree</th>
<th>Agree</th>
<th>True for some extent</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>28%</td>
<td>56%</td>
<td>14%</td>
<td>2%</td>
<td>0%</td>
</tr>
</tbody>
</table>
2.2 Planning Processes
The Mathematics program is intensively involved in determining and improving the effectiveness of its educational and service efforts at all levels. These efforts begin with an annual planning process, including specific completion deadlines. They also include program-wide and divisional planning goals based on the mission of the program. The strategic plan of College, which is the basis of planning in all programs, has been formulated with the wide consultation and participation of all stakeholders (Annex G : Strategic Plan of the College).

Objectives of the Department of Mathematics
1- To produce qualified graduates capable of meeting the challenges posed by the extensive development witnessed by the Kingdom.
2- To attract mathematically talented candidates for teaching and research positions, and to prepare them for Faculty posts in the universities of the Kingdom.
3- To provide courses required by other scientific programs and colleges at Majmaah University.
4- To encourage research programs and participation in specialized scientific conferences.
5- To offer classes and workshops for the various sectors requiring mathematical training, and to provide consultations to research centers and institutions.

Quality Evaluation of Program Administration.
Summary of strengths:
1. Decisions concerning the program aspects are first taken in the Department Council and documented in the meeting of minutes.
2. Planning for the delivery of the program at the beginning of every academic year and establishing the required committees.

3. Decisions taken by the Department Committees on procedural issues are used as a reference for decisions of similar cases in the future.

4. Course registration and students grades submission are accomplished electronically through the education system.

**Areas for improvement:**

1. The administrative supporting staff is not enough. The number of the supporting staff should be proportional to the duties of the department and its size.

2. The terms of reference for all committees and administrative staff should be written and clearly specified.

**Priorities for action:**

1. Requesting more positions for administrative staff.

2. Improving all facilities and potentials.

**Standard 3. Quality Management and Improvement (Overall rating:**

****

Teaching and other staff involved in the program are committed to improving both their own performance and the quality of the program as a whole. Regular valuations of quality must be undertaken within each course based on valid evidence and appropriate benchmarks, and plans for improvement made and implemented. Central importance must be attached to student learning outcomes with each course contributing to the achievement to overall of the program objectives.

The Quality Assurance is a process of evaluation and following-up the quality of performance in all aspects of the program, such as inputs, processes and outcomes. The desired levels of quality maintaining and approving ensure stakeholders that the quality in the program is being maintained and defined as a quality management system which complies with standards of good practice within the concept of appropriateness of the mission and objectives of the program.

The quality management system at the College of Science is based on two pillars:

1. The first pillar is the Internal Quality Assurance Management based on the applied Standards for Quality Assurance and Accreditation of Higher Education Institutions
2. The second pillar is the National Qualification Framework for Higher Education.

Internal Quality Assurance Management

The program Internal Quality Assurance Management is achieved through:

1) Reviewing the program internally and externally.
2) Conducting students’ evaluation for all courses, as well as all monitoring its results.
3) Conducting Academic Teaching Staff evaluation on semester bases.
4) Conducting graduation surveys on annual bases.
5) Getting employer feedback in annual bases.
6) Conducting alumni surveys and monitoring the results.

7. All the results of the above surveys reviewed and discussed at the levels of Vice Dean for Quality and Development and program, and its improvement is monitored on annual bases.

Quality assurance Management Committee was established and developed by the Department of mathematics to continuously support the University's vision improvement of its programs and the academic and administrative units for institutional accreditation.

Informing the Committee assessed the compliance of the requirements of the third standard of the national assessment and accreditation NCAAA.

Concerning the management and development of quality assurance the Commission will make the following: 1. Evaluation of the documents and evidence of quality assurance and development.

2. Make a proposal of unfinished requirements plan.

3. Submit a report to assess of the standard requirements.

The Unit tasks

The core tasks of the Committee are:

1) Determine the nature and sources of information.
2) Inventory of components, measurement instruments and associated subsidiary criteria.
3) Preparation of action plan to achieve the objectives referred to above.
4) Design and collect information forms from different sources.
5) Check the practice field which relates to the third standard requirements.
6) Collect the information from Responsible authorities and analysis.
7) Introduce the evidence of finished requirements.
8) Restriction on the unfinished requirements.
9) Introduce the Plan process which enables the University to finish the requirements.
10) Preparation of the reports.
11) Follow-up the implementation of the recommendations of unfinished requirements and collect the evidence.

Contact officials and information sources:

1) The senior managements of the University.
2) The Deans of faculties.
3) Heads of departments.
4) Deans of deanships and specialized centers.
5) Managers and staff.
6) Faculty members.
7) Quality faculties units.
8) Students.

The nature of the data and information:

The Commission gathers information and documents for assessing response to quality management standards.

**Methods and tools to collect data and information:**

This will be done through

1) Interviews
2) Questionnaires
3) Collection of reports
The basic components of the third standard:

- Commitment to quality improvement in our program.
- The scope of quality assurance processes.
- Manage the quality assurance processes.
- Using of indicators performance and Comparison between reference points.
- Independent verification of the estimation.

The preliminary report of the standard:

3.1 Commitment to quality improvement in our program (see H 3-1)

The Vice Dean for Quality and Development is considered a backbone and mainly responsible for carrying out and running the quality management system via quality and development Unit.

The continuous improvements and quality management at the college are run by the entire program's coordinator with the collaboration of all staff members' at all different levels of college/program. Its quality processes and procedures are implemented by integrating and using NCAAA Internal Quality Assurance Arrangements.

The Quality improvement and quality management are carried out by the guidance of the Dean and the Vice Dean for Quality and development during the preparation of programs documents.

This guidance leads to increase the awareness of the quality measures which is created within all program levels and linked to qualification titles to describe the increasing intellectual demand and complexity of learning estimated or expected as graduates performance progress.

The quality awareness leads to synchronize stages during the preparation of all documentation of the program.

<table>
<thead>
<tr>
<th>Sub-Standard</th>
<th>Is this true?</th>
<th>How well is this done?</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1.1 All teaching and other staff participate in self-assessments and cooperate with reporting and improvement processes in their sphere of activity.</td>
<td>Y</td>
<td>****</td>
</tr>
</tbody>
</table>
3.1.2 Creativity and innovation combined with clear guidelines and accountability processes are actively encouraged. 

3.1.3 Mistakes and weaknesses are acknowledged, and dealt with constructively, with help given for improvement.

3.1.4 Improvements in quality are appropriately acknowledged and outstanding achievements recognized.

3.1.5 Evaluation and planning for quality improvement are integrated into normal administrative processes.

| Overall Assessment | **** |

4. Evaluating and planning of improvement through special processes.

A questionnaire for the improvement of these elements took part in the survey of faculty with the numbering section and the results were as follows:

**Table 34: Commitment to quality improvement in our program.**

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>agree</th>
<th>True for some extent</th>
<th>disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>%27</td>
<td>%36</td>
<td>%18</td>
<td>%14</td>
<td>%5</td>
</tr>
<tr>
<td>2</td>
<td>%32</td>
<td>%32</td>
<td>%23</td>
<td>%9</td>
<td>%5</td>
</tr>
<tr>
<td>3</td>
<td>%27</td>
<td>%32</td>
<td>%23</td>
<td>%14</td>
<td>%5</td>
</tr>
<tr>
<td>4</td>
<td>%32</td>
<td>%27</td>
<td>%14</td>
<td>%23</td>
<td>%5</td>
</tr>
<tr>
<td>Total</td>
<td>29.5 %</td>
<td>31%</td>
<td>19.5 %</td>
<td>15 %</td>
<td>5 %</td>
</tr>
</tbody>
</table>
We notice from previous results:

1. The Committee felt that there was a large effort from the College Administration which is represented by the Dean and Vice Dean for quality to improve the quality of the College through a rigorous program of continuous improvements and innovations.

2. The Committee felt that all faculty members are involved in the processes of self-evaluation, and cooperate in reporting the improved performance in activities.

3. There is inability of some staff in understanding the meaning of quality and the benefits for the college and students and the improving of the educational process to prepare graduates who are able to the Advancement of society.

Therefore, the Commission recommends that sessions be made to clarify the concept of quality and relevance.

Comment:

Points of Strength:

- The College has appointed a Vice Dean of Quality and Development to guide this important process.
There was a large effort from the College Administration which is represented by the Dean and Vice Dean for quality to improve the quality of the College through a rigorous program of continuous improvements and innovations.

Most of faculty members are involved in the processes of self-evaluation, and cooperate in reporting the improved performance in activities.

Points for improvement:

- Involving all members of the Faculty and staff in the assessment process, cooperating in the preparation of reports and improving the performance of their activities.
- The procedures to be taken to verify College goals and objectives are limited.
- Sessions must be made to clarify the concept of quality and relevance.

Priorities for improvement:

- Continuing education for all staff, including administrators, about basic quality management concepts.
- Examining the reasons for the shortcomings, determining the mistakes, identifying responsibilities and how to lay the Foundation and plans to prevent.

### 3.2 The scope of quality assurance processes (See H 3-2)

At the level of the college, commitment has been initiated for continuing improvement in the performance of its activities, and maintains the program Mission and Objectives looking after the social demands and needs. The college initiated the Quality Management System model to evaluate and improve the quality performance at the program.

<table>
<thead>
<tr>
<th>Sub-standard</th>
<th>Is this true? Y/No/NA</th>
<th>How well is this done? (enter stars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2.1 Quality evaluations deal with all aspects of program planning and delivery including student learning outcomes and facilities and services to support that learning whether they are managed by administrators of the program or by others based elsewhere in the institution.</td>
<td>Y</td>
<td>****</td>
</tr>
<tr>
<td>3.2.2 Quality evaluations and reports provide an overview of performance for the total program as a whole as well as components within it, including</td>
<td>Y</td>
<td>****</td>
</tr>
</tbody>
</table>
all courses and both sections if the program is offered in male and female sections.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2.3</td>
<td>Evaluations consider inputs, processes, outcomes and processes, with particular attention to learning outcomes for students.</td>
</tr>
<tr>
<td></td>
<td>Y ****</td>
</tr>
<tr>
<td>3.2.4</td>
<td>Evaluations include both routine activities and strategic priorities for improvement.</td>
</tr>
<tr>
<td></td>
<td>Y ****</td>
</tr>
<tr>
<td>3.2.5</td>
<td>Processes are designed to ensure both that acceptable standards are met, and that there is continuing improvement in performance.</td>
</tr>
<tr>
<td></td>
<td>Y ****</td>
</tr>
<tr>
<td>3.2.6</td>
<td>In sections for male and female students detailed evaluations in relation to all standards are carried out in a consistent way in both sections and quality reports on those standards report on any significant differences found and make appropriate recommendations for action in response.</td>
</tr>
<tr>
<td>For male only</td>
<td>****</td>
</tr>
</tbody>
</table>

**Overall Assessment**

For male only ****

A questionnaire for the improvement of these elements took part in the survey of faculty with the section numbering and the results were as follows:

**Table 35: Quality assurance processes**

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% Strongly agree agree True for some extent disagree Strongly disagree</td>
</tr>
<tr>
<td>1</td>
<td>%23 %36 %18 %14 %5</td>
</tr>
<tr>
<td>2</td>
<td>%27 %36 %18 %14 %5</td>
</tr>
<tr>
<td>3</td>
<td>%23 %36 %23 %14 %5</td>
</tr>
<tr>
<td>4</td>
<td>%32 %27 %23 %14 %5</td>
</tr>
<tr>
<td>AVERAGE</td>
<td>26.250% 34.250% 20.500% 14.000% 5.000%</td>
</tr>
</tbody>
</table>
Figure 10: Quality assurance processes

We notice from the previous results:

1. The Committee considered that quality evaluation processes gives an overview of aspects of quality in our program.

2. The Committee remarked that quality assurance processes ensure the required standards.

Comment:

Points of Strength:

- Quality assurance processes ensure the required standards.
- Quality evaluation processes give an overview of aspects of quality in our program.

Points for improvement:

- Quality assurance operations must cover all aspects of planning program and implementation, including activities and resources offered by other departments in the department.
- The procedures to be taken to verify faculty goals and objectives are limited.
Priorities for improvement:

- Ensure quality assurance processes interpolation the standards required, and ensure that there is a continuous improvement of performance.
- Quality assessment processes must give an overview of the quality aspects in the program as a whole and in each of its components (including all scheduled courses).

3.3 Quality assurance processes management (see H 3-3)

Various mechanisms are used to ensure quality in all areas of the Department. These mechanisms enable and ensure the involvement of students and other stakeholders in the quality system. Students are encouraged to provide feedback on the quality of teaching and learning through students' surveys. The Department identifies the core knowledge competencies and skills that Mathematics graduates should master. These core knowledge outcomes developed in all required courses, and specified the core skill outcomes across the curriculum. This process continues with the development of teaching-and-learning strategies best suited to assist students in attaining the learning outcomes. These strategies are implemented by faculty members in Program courses. Observations of Peers through classroom visits are considered as a good practice of quality assurance.

<table>
<thead>
<tr>
<th>Sub-standard</th>
<th>Is this true?</th>
<th>How well is this done? (enter stars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.3.1 Quality assurance processes are fully integrated into normal planning and program delivery arrangements.</td>
<td>Y</td>
<td>****</td>
</tr>
<tr>
<td>3.3.2 Evaluations are (i) based on evidence, (ii) linked to appropriate standards, (iii) include predetermined performance indicators, and (iv) take account of independent verification of interpretations.</td>
<td>Y</td>
<td>****</td>
</tr>
<tr>
<td>3.3.3 Quality assurance processes make use of standard forms and survey instruments for use across the institution with any special additional elements added to meet the particular requirements of the program.</td>
<td>Y</td>
<td>****</td>
</tr>
<tr>
<td>3.3.4 Survey data is collected from students and analysed for individual courses, the program as a</td>
<td>Y</td>
<td>****</td>
</tr>
</tbody>
</table>
whole, and also from graduates and employers of those graduates.

### 3.3.5 Statistical data on indicators, including grade distributions, progression and completion rates are retained in an accessible central data base and regularly reviewed and reported in annual program reports.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>****</td>
</tr>
</tbody>
</table>

### 3.3.6 Responsibility is given to a member of the teaching staff to provide leadership and support for the management of quality assurance processes. The responsible person should involve other staff in planning and carrying out the assurance processes.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>*****</td>
</tr>
</tbody>
</table>

### 3.3.7 The quality assurance arrangements for the program should be regularly evaluated and improved. As part of these reviews unnecessary requirements should be removed to streamline the system and avoid unnecessary work.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Y</td>
<td>****</td>
</tr>
</tbody>
</table>

### 3.3.8 Processes for evaluation of quality should be transparent with criteria for judgments and evidence considered made clear.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Y</td>
<td>****</td>
</tr>
</tbody>
</table>

**Overall Assessment**

<p>| |</p>
<table>
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<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>****</td>
</tr>
</tbody>
</table>

A questionnaire for the improvement of these elements took part in the survey of faculty with the section numbering and the results were as follows:

**Table 36: Quality assurance processes management**

<table>
<thead>
<tr>
<th></th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly agree</td>
</tr>
<tr>
<td>1</td>
<td>%14</td>
</tr>
<tr>
<td>2</td>
<td>%14</td>
</tr>
<tr>
<td>3</td>
<td>%23</td>
</tr>
<tr>
<td>total</td>
<td>17%</td>
</tr>
</tbody>
</table>
Figure 11: Quality assurance processes management

We infer notice previous results:

1. Statistical data for the indicators are not saved in the database.

2. One of the faculty members in the program is responsible for leading and supporting the quality assurance management processes, involving faculty and there is no activity for employees in quality assurance activities.

3. Putting quality assurance program procedures for improvement but not regularly, excluding unnecessary requirements as part of this review to simplify the system and avoid any unnecessary ones.

Comment:

Points of Strength:

- Evaluation processes at the faculty are carried out according to a number of clear standards and criteria.
- Quality committees and units at the faculty and program levels have specific and clear tasks, powers and duties

Points for improvement:

- The procedures to be taken to verify faculty goals and objectives are limited.
Independent verification processes of results do not include all activities that are evaluated (and require an independent review)

**Priorities for improvement:**

- A mechanism must be set to enforce independent verification of performance evaluation results and outcomes and ensure they cover all activities (being evaluated) and require an independent review.

**3.4 Using of performance indicators and reference points (see H 3-4)**

Specific indicators must be identified for monitoring performance and appropriate benchmarks selected for comparative evaluation of the achievement of goals and objectives and quality of performance more generally.

<table>
<thead>
<tr>
<th>Sub-Standard</th>
<th>Is this true?</th>
<th>How well is this done? (enter stars)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3.4.1</strong> Information is provided regularly on key performance indicators that are selected for all programs in the institution.</td>
<td>Y</td>
<td>****</td>
</tr>
<tr>
<td><strong>3.4.2</strong> Additional performance indicators relevant to the particular program are also identified, used for program evaluations and regularly reported on.</td>
<td>Y</td>
<td>****</td>
</tr>
<tr>
<td><strong>3.4.3</strong> The additional benchmarks for the program are approved by the appropriate senior committee or council within the institution (e.g. senior academic committee, university council).</td>
<td>Y</td>
<td>****</td>
</tr>
<tr>
<td><strong>3.4.4</strong> Benchmarks for comparing quality of performance (for example with past performance or comparisons with other institutions) are established and achievements in relation to those benchmarks is regularly monitored.</td>
<td>Y</td>
<td>****</td>
</tr>
<tr>
<td><strong>3.4.5</strong> The format for indicators and benchmarks is consistent with that adopted for the institution as a whole.</td>
<td>Y</td>
<td>****</td>
</tr>
</tbody>
</table>

**Overall Assessment**

****

A questionnaire for the improvement of these elements took part in the survey of faculty with the section numbering and the results were as follows:
Table 37: using of performance indicators and reference points

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>agree</th>
<th>True for some extent</th>
<th>disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>%31.22</td>
<td>%23</td>
<td>%23</td>
<td>%18</td>
<td>%5</td>
</tr>
<tr>
<td>2</td>
<td>%27</td>
<td>%18</td>
<td>%18</td>
<td>%23</td>
<td>%14</td>
</tr>
<tr>
<td>3</td>
<td>%27</td>
<td>%27</td>
<td>%23</td>
<td>%18</td>
<td>%5</td>
</tr>
<tr>
<td>Total</td>
<td>28.34</td>
<td>22.66</td>
<td>21.33%</td>
<td>19.67%</td>
<td>8.00%</td>
</tr>
</tbody>
</table>

Figure 12: Using of performance indicators and reference points

We notice from previous results:

1. Most of those who participated in the survey felt that the department provides information about the basic performance indictors needed.

2. Selected performance indicators (criteria) and additional reference comparison program which used to evaluation and reporting.
3. Most of those who participated in the survey felt that the wording and format indicators (criteria) used in our equivalent program in all parts of the educational institution.

**Comment:**

**Points of Strength:**

- The department provides information about the basic performance indicators needed.
- Evaluation processes at the department are carried out according to a number of clear standards and criteria.

**Points for improvement:**

- KPI and benchmarking results for some activities are used in a limited way.

**Priorities for improvement:**

- It is necessary to enforce use of results of KPIs and benchmarking processes in all department activities that are being evaluated (via KPIs) and benefit from such results in improvement and development processes.

### 3.5 Independent verification of the evaluation (see H 3-5)

Evaluations of performance must be based on evidence (including but not restricted to predetermined performance indicators and benchmarks) and conclusions based on that evidence must be independently verified.

<table>
<thead>
<tr>
<th>Sub-Standard</th>
<th>Is this true?</th>
<th>How well is this done? (enter stars)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3.5.1</strong> Self-evaluations of quality of performance are checked against several related sources evidence including feedback through user surveys and opinions of stakeholders such as students and faculty, graduates and employers.</td>
<td>Y</td>
<td>****</td>
</tr>
<tr>
<td><strong>3.5.2</strong> Interpretations of evidence of quality of performance are verified through independent advice from persons familiar with the type of activity concerned and impartial mechanisms are used to reconcile differing opinions.</td>
<td>Y</td>
<td>****</td>
</tr>
<tr>
<td><strong>3.5.3</strong> Institutional policies and procedures are adhered to for the verification of standards of achievement by students in relation to other institutions and the</td>
<td>Y</td>
<td>****</td>
</tr>
</tbody>
</table>
requirements of the National Qualifications Framework.

Overall Assessment ****

Table 38: Independent verification of the evaluation

<table>
<thead>
<tr>
<th></th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly agree</td>
</tr>
<tr>
<td>1</td>
<td>%25.98</td>
</tr>
<tr>
<td>2</td>
<td>%18</td>
</tr>
<tr>
<td>3</td>
<td>%23</td>
</tr>
<tr>
<td>Total</td>
<td>22.33%</td>
</tr>
</tbody>
</table>

Figure 13 : Independent verification of the evaluation

We notice from previous results:

1. Most of those who participated in the survey felt that the processes of self-evaluation of the quality of performance depends on multiple sources of evidence, including feedback through surveys of users and beneficiaries (stakeholders) such as students, faculty and staff, alumni and employees (for graduates of the program).
2. Most of the participants in the questionnaire validated evidence interpretations of quality by independent advice from persons who are familiar with the type of activity concerned and impartial mechanisms are used to remove the incompatibility between the different views.

3. Most of those who participated in the survey see verified standards of the students learning outcomes of students compared to the requirements of "national qualifications framework" and the levels achieved in similar programs in educational institutions.

**Comment:**

**Points of Strength:**

- The processes of self-evaluation of the quality of performance depends on multiple sources of evidence, including feedback through surveys of users and beneficiaries (stakeholders) such as students, faculty and staff, alumni, employment (for graduates of the program).
- Most of those who participated in the survey see verified standards of the students learning outcomes of students compared to the requirements of "national qualifications framework" and the levels achieved in similar programs in educational institutions.

**Points for improvement:**

- Independent external evaluation of learning outcomes achieved by students is limited and does not cover all academic programs at the faculty.

**Priorities for improvement:**

- Required measures should be taken to enforce external independent evaluation of all faculty academic programs as regards the learning outcomes achieved by the students.

**Key Performance Indicators involved**

The following key performance indicators are used for the purpose of assessing performance to verify quality interpretations:
Self-Study Report

1. Proportion of the courses in which student evaluations were conducted during a year time.
2. Proportion of the course reports conducted within a year time.

Program Strength:

1. There is a strong commitment to Quality Improvement amongst leadership in the College. This has resulted in increased awareness and penetration to all levels with an understanding for the need of consistent documentation at the program and individual levels.

2. Course and programs' reports are regularly submitted.

3. Program courses, staff evaluation surveys, Peer to Peer observations are regularly conducted.

4. The quality performance and improvement is checked against the related evidences, and using surveys feedback, and opinion of Stakeholders’, graduates”, staff members, and employers.

5. Improvement has been noticed and seen via the program courses documentations that are resulted via quality improvements and due to different monitoring reports as considered to quality closing loop cycles.

6. The NCAAA is given as continuous improvement. Meanwhile the use of Majmaah University will give the opportunity to have a continuous improvement as soon as the University Quality Deanship finalizes its documentations.

7. Quality improvement plans were synchronized and developed together with KPIs and benchmarks.

Areas for improvement
1- Quality improvement at Mathematics Department should be integrated into all academic and administrative processes.
2- All data analysis should be made and used as the basis for continuous improvements for Mathematics department.
3- Continuing education for all staff, including administrators, about basic quality management concepts.
4- The main KPIs need to be continuously reviewed and improved.

Priorities for action

1- Plan for quality improvement to be integrated into all academic and administrative processes.
2- Hire more staff in the Academic Quality unit and provide needed training.
3- Continue to use the approved set of KPI to continuously measure performance.

**Standard 4. Learning and Teaching Overall Rating:** (****)

The standard of teaching and learning is the most important criteria in any self-assessment program. For this purpose, the department formulated a committee to study this standard and collect the evidences for each strong point with giving an improvement to any weak point. This committee consists of

Assist. Prof.: Jawdat A. Alebraheem.

Lecturer: Mohamed O. M. El-Mahjoub.

Lecturer: Naveed Y. M. Yaqoob.

After several meetings this committee finished

1- Self-Evaluation Scales for Higher Education Programs, Standard 4 "Learning and Teaching"
2- Collect the evidences of every strong point
3- Give an improvement to each weak point
4- Collect the improvements in an improvement plane with deciding the responsibility and the period of doing it. Finally, we summarize our work in this report.

Before giving the strong and weak points in each substandard in the learning and teaching standard, we give some information about the department staff, the ratio of students to the teaching staff and some questionnaire with their results and graphs.

A. Our department consists of 22 faculty members (two professors, one associate professor, sixteen assistant professor and three lecturers). No one of our teaching staff works as a part time teaching staff.

B. The ratio of students to teaching staff is near to 1:11.

C. The committee made a questionnaire to the teaching staff has the following eight points

1- Student assessment mechanisms are appropriate for the forms of learning sought.

2- Assessment processes are clearly communicated to students at the beginning of courses.

3- Criteria and processes for academic appeals should be made known to students and administered equitably.

4- Teaching staff are available at sufficient scheduled times for consultation and advice students.

5- The progress of individual students is monitored and assistance and/or counselling provided to those who are facing difficulties.

6- The strategies of teaching and assessment set out in program and course specifications are followed by teaching staff with flexibility to respond to the needs of students.

7- The quality standards are the most important things that help students progress academically and on organization of the faculty member for his time and his lectures.

8- All required in quality standards are clear to each faculty member.

Table 39: The result of this questionnaire is given as

<table>
<thead>
<tr>
<th>Sr #</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Nearly Correct</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>11</td>
<td>6</td>
</tr>
</tbody>
</table>
Its statistical graph is given by

![Chart Title]

Figure 14: Levels for approval of changes in courses and program

Finally in the following we discuss in each substandard of the learning and teaching standard, strong points, evidences, weak points and discuss how to improve these weak points.
4.1 Institutional Oversight of Quality of Learning and Teaching (****)

The Program has been observed through the Deanship of Quality and Skills Development in Majmaah University and international agencies (ASIIN).

Points of Strengths:
1- The program got the first program in the university for the programs most ready-for accreditation based on internal reviewing at the NCAAA standards for the academic 2014/15.
2- The program has gotten the academic accreditation from good reputation international agency ASIIN.

Evidences

The evidences of our results are:
2- Accreditation certificate from international agency ASIIN.

4.2 Student Learning Outcomes (****)

Intended student learning outcomes are consistent with the National Qualifications Framework, and with generally accepted standards for the field of study concerned including requirements for any professions for which students are being prepared.

<table>
<thead>
<tr>
<th>Consistency between College &amp; Program Missions</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>College: Science</td>
<td>MUP02</td>
</tr>
<tr>
<td>Department: Mathematics</td>
<td></td>
</tr>
<tr>
<td>Program: B.Sc. (Mathematics)</td>
<td></td>
</tr>
</tbody>
</table>

### College Mission

College of science provides scientific excellence with effective plans and developed programs that enable students to acquire the knowledge and skills needed to compete in the labour market.
### Program Objectives

<table>
<thead>
<tr>
<th>Student learning</th>
<th>Objective (1)</th>
<th>Objective (2)</th>
<th>Objective (3)</th>
<th>Objective (4)</th>
<th>Objective (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>a1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>b1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>c1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c2</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>c3</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>D</td>
<td>d1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>d2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N. A.</td>
</tr>
</tbody>
</table>

(A) Knowledge  
(B) Cognitive skills  
(C) Interpersonal skills and responsibility  
(D) Communication, information technology and numerical skills  
(E) Psychomotor skills

**Points of Strengths:**
The following are points which are good enough.

1. Different methods of evaluation student learning outcomes are followed as presentations, oral exams, electronic exams, quizzes, and homework, in addition to, writing exams.
2. Determining intended learning outcomes are depended after consideration of relevant academic and professional advice.
3. Comprehensive strategies are established for those institutions which has identified with special attributes.

4. Appropriate program evaluation mechanisms including graduating student surveys, employment outcome data, employer feedback and subsequent performance of graduates are used to provide evidence about the appropriateness of intended learning outcomes and the extent to which they are achieved.

The following points are strong and need some minor improvements:

1. Intended learning outcomes are consistent with the Qualifications Framework.
2. Intended learning outcomes that are consistent with professional practice in Saudi Arabia.

Evidences
The evidences of our results are:

1. Direct evaluation report and course portfolio.
2. The Consistency matrices for mathematics department are attached.
3. A consultant Council was formulated and the department council decision is attached. The first meeting of this council has been in 15/4/1437.
4. All course specifications contains the learning outcomes.
5. The courses specifications have been finished to all courses and exist in the quality unit in the department.
6. Some questionnaires, their results and statistical analysis attached.

4.3 Program Development Processes (****)

The Program is planned as coherent packages of learning experiences in which all courses contribute in planned ways to the intended learning outcomes for the program

Points of Strengths: The following are points which are good enough.

1. Self-learning resources for students are provided through D2L system and mathematics department website.
2- The content and strategies set out in course specifications are coordinated with other courses and followed in practice to ensure effective progressive development of learning for the total program in all the domains of learning.

3- Plans for the delivery of the program and for its evaluation are set out in detailed program specifications that include knowledge and skills to be acquired, and strategies for teaching and assessment for the progressive development of learning in all the domains of learning.

4- Plans for courses are set out in course specifications that include knowledge and skills to be acquired and strategies for teaching and assessment for the domains of learning to be addressed in each course.

The following points are strong but needs some minor improvements:

1- Planning should include any action necessary to ensure that teaching staff are familiar with and are able to use the strategies included in the program and course specifications.

2- New program proposals are assessed, approved or rejected by the institution’s senior academic.

Evidences

The evidences of our results are:

1. D2L system and mathematics department website.
2. Course specification, Course reports and some exams covers sheets are attached
3. The learning outcomes schedule for every course is attached
4. The e-mails concerning the workshops of discussing of the learning outcomes are attached (for last year).
5. The head of mathematics department follows up the staff members about their work and collects the midterms exams, quizzes and results and reviews all. Give his comments as a feedback to the staff. The learning outcomes were already specified in the exams papers. The council decision is attached.
6. A new plan of the program has been finished and reviewed from experts from the university and outside it. It was be accepted from the ministry of higher education (the acceptance decision letters are attached) (for last year).

Points of weakness: The following are points which are weak and have to be improved. Under each one we give the summary of the improvement plane.
1. Different programs should be added as statistic, applied mathematics, in addition to, master degree program.

2. The academic and/or professional fields for which students are being prepared are monitored on a continuing basis with necessary adjustments made in programs and in text and reference materials to ensure continuing relevance and quality.
   a) Design the questionnaires to be efficient by introducing a few and clear questions in it.
   b) Enhancing the culture of dealing with questionnaires in the society.
   c) Increase the number of destination which will fill these questionnaires.
   d) The questionnaires should be presented in both the format such as soft and hard copies.
   e) Study these questionnaires and analyse them carefully to point the weak points in learning outcomes.
   f) Put mechanisms to avoid these weak points.

3. In professional programs continuing advisory panels that include leading practitioners from the relevant profession monitor and advise on content and quality of programs.
   a) Activate the consultant council and determine a fixed date for its committee.
   b) Specify the rules and tasks of this council.
   c) Circulate these rules and tasks between the faculty members and student.

4.4 Program Evaluation and Review Processes (***)

The quality of all courses and of the program as a whole is monitored regularly through appropriate evaluation mechanisms and amended as required, with more extensive quality reviews conducted periodically.

Points of Strengths: The following are points which are good enough.

1- Courses and programs are evaluated and reported on annually with information about the effectiveness of planned strategies and the extent to which intended learning outcomes are being achieved.

2- Quality indicators that include learning outcome measures are identified and used for all courses and the program as a whole.

3- When changes are made as a result of evaluations details of those changes and the reasons for them are retained in course and program portfolios.
4- Annual reports including quality assurance data are provided and reviewed by
senior administrators and quality committees.
5- Course completion, program progression and completion rates, and student
course and program evaluations, are retained in central records in a form that
can be readily accessed by the department and college, and analysed centrally
with summaries and comparative data distributed automatically to
departments, colleges, senior administrators and relevant committees at least
once each year.
6- Records of student completion rates in all courses and the program as a whole
are kept and used as quality indicators.
7- Formulate a committee about any problems found in the program evaluations
and activate it.
8- In addition to annual evaluations a comprehensive reassessment of the
program should be conducted at least once every five years. Procedures for
conducting these reassessments should be consistent with policies and
procedures for the institution.

Evidences
The evidences of our results are:
1. Course specification, Course reports and some exams coves sheets are
   attached.
2. Some course specifications and course reports are attached.
3. The quality matrices are attached.
4. Admission deanship documents.
5. The academic portal.
6. Sample of results of a student is attached.
7. An inner committees in the department were formulated for reviewing all
courses portfolios and a detailed report has been implemented concerning the
hall program which submitted for the deanship of faculty to review it by the
quality assurance committee then submitting a detailed report about all
programs in the faculty to the university council for reviewing them (the inner
committees schedule, the major committee formulation and the previous
detailed report were attached).
8. All courses portfolios are available in the room of quality unit.
9. Collecting the programs plans for the corresponding universities which were considered as a benchmark. The benchmarking was done with KSU and AIN SHAMS University.

10. The standards and the improvement plan were done in 1433 and in 1435 and now will be updated in 1436 also all quality criteria (an Arabic manuscript of the improvement plan for the years 1433 and 1435 were attached).

11. The department council record about the activities of the consultant council.

**Points of weakness:** The following are points which are weak and have to be improved. Under each one we give the summary of the improvement plane.

a) The tasks of this committee must be determined and clear for all.
   
   Suggested tasks are
   - Collect all the problems in the program.
   - Appointing the person who should be responsible for solving each problem.
   - Follow up with the dean to make sure that this problem has been solved.

1) Program reviews conducted within the institution involve experienced people from relevant industries and professions, and experienced teaching staff from other institutions.

   a) Activate the consultant council and determine a fixed date for its committee.
   b) Circulate these rules and tasks between the faculty members and student.
   c) Specify the rules and tasks of this council.
   d) Make cooperation with two other local faculties and a foreign faculty for reviewing the corresponding programs.

2) Procedures are followed that ensure that in program reviews information about the appropriateness of learning outcomes sought and the extent to which they are achieved is sought from students and graduates through surveys and interviews, discussions with teaching staff, and other stakeholders such as employers.

   a) Design the questionnaires to be efficient by introducing a few and clear questions in it.
   b) Enhancing the culture of dealing with questionnaires in the society.
c) Increase the number of destination which will fill these questionnaires.
d) The questionnaires should be presented in both the format such as soft and hard copies.
e) Put mechanisms to avoid these weak points.
f) Make seminars and workshops with the students, faculty members and relevant corporations about the program and study their recommendations.
g) Study these questionnaires and analyse them carefully to point the weak points in learning outcomes.
h) After the previous points we make overall assessment to avoid the weak points in the program.

4.5 Student Assessment

Student assessment processes are appropriate for the intended learning outcomes and effectively and fairly administered with independent verification of standards achieved.

<table>
<thead>
<tr>
<th>Courses</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>PENG 111</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>PMTH 112</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>PCOM 113</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>PSSC 114</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
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# Self-Study Report

## Faculty of Science - Mathematics Department

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Zulfi, Faculty of Sciences
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### Program Learning Outcomes

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<th>Foundation Skills (University Level)</th>
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![Bar chart showing c1, c2, c3 percentages]
Fundamental Skills (Sector Section)

| a1    | 70% |

Core Skills (College Section)

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### Mathematics Department - Student Outcome Assessment (Direct Method)

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<td>MATH 220</td>
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Points of Strengths: The following are points which are good enough.

1- Assessment processes are clearly communicated to students.

2- Grading of students tests, assignments and projects is assisted by the use of matrices or other means to ensure that the planned range of domains of student learning outcomes are addressed.

3- Feedback on performance and results of assessments are given promptly to students and accompanied by mechanisms for assistance if required.

4- Assessments of student work should be conducted fairly and objectively.
5- Arrangements should be made within the institution for training of teaching staff in the theory and practice of student assessment.

6- Criteria and processes for academic appeals should be made known to students and administered equitably

The following point is strong but needs some minor improvements:

1- Student assessment mechanisms are appropriate for the forms of learning sought

**Evidences**

The evidences of our results are:

1. The grading policy was made clear in the courses specifications and in the onset of lectures.
2. A direct evaluation matrix model is attached.
3. The announcements of the quality and E-learning deanships and the procedures of the registration for the faculty members were attached.
4. Some course specifications were attached.
5. The results and analysis of our special questionnaire.
6. The matrices of quality assurance.
7. Samples of the results of students from academic portal and a copy of the department announcements board that consist the mid-terms exams results.
8. Faculty council Terms and conditions of the exams
9. Student guide.

**Points of weakness:** The following are points which are weak and have to be improved.

Under each one we give the summary of the improvement plane.

1) Appropriate valid and reliable mechanisms are used for verifying standards of student achievement in relation to relevant internal and external benchmarks. The standard of work required for different grades should be consistent over time, comparable in courses offered within a program and college and the institution as a whole, and in
comparison with other highly regarded institutions. (Arrangements may include measures such as check marking of random samples of student work by faculty at other institutions, and independent comparisons of standards achieved with other comparable institutions within Saudi Arabia, and internationally.)

a) Make a criteria for exams that have resemblance with international criteria.
b) The exam of each faculty members must be reviewed by another faculty member to confirm the criteria.
c) Specify some international universities that can cooperate with our university to review the confirmation of the criteria.
d) Specify some local universities that can cooperate with our university to review the confirmation of the criteria.
e) The reports from these institution must be discussed with the faculty council to put appropriate procedure for improvement and directing the department council about these improvement.

2) Appropriate procedures have been established and are followed to deal with situations where standards of student achievement are inadequate or inconsistently assessed.

3) Effective procedures are followed that ensure that work submitted by students is actually done by the students concerned.

The improvement of these two points are

a) Give extra time to those students who facing some problem in understanding the course.
b) The student should be given unique homework.
c) Make a criteria for exams that have resemblance with international criteria.
d) The exam of each faculty members must be reviewed by another faculty member to confirm the criteria.
Self-Study Report

e) Specify some local universities that can cooperate with our university to review the confirmation of the criteria.

f) Specify some international universities that can cooperate with our university to review the confirmation of the criteria.

g) The reports from these institution must be discussed with the faculty council to put appropriate procedure for improvement and directing the department council about these improvement.

4.6 Educational Assistance for Students (***)

Effective systems are in place for assisting student learning through academic advice, study facilities, monitoring student progress, encouraging high performing students and provision of assistance when needed by individuals.

Points of Strengths: The following are points which are good enough.

1- Teaching staff are available at sufficient scheduled times for consultation and advice to students.

2- Teaching resources (including staffing, learning resources and equipment, and clinical or other field placements) are sufficient to ensure achievement of the intended learning outcomes.

3- Appropriate preparatory and orientation mechanisms are provided to prepare students for study in a higher education environment. Particular attention is given to preparation for the language of instruction, self-directed learning, and bridging programs if necessary for students transferring to the institution with credit for previous studies.

4- Systems are in place for monitoring and coordinating student workload.

5- The progress of individual students is monitored and assistance and/or counselling provided to those facing difficulties.

6- Feedback on performance by students and results of assessments is given promptly to students and accompanied by mechanisms for providing assistance if needed.
7- Adequate facilities are provided for private study with access to computer terminals and other necessary equipment.

8- Teaching staff are familiar with the support services available in the institution for students, and refer them to appropriate sources of assistance when required.

9- The adequacy of arrangements for assistance to students is periodically assessed through processes that include, but are not limited to, feedback from students.

The following point is strong but needs some minor improvements:

1- Year to year progression rates and program completion rates are monitored, and action taken to help any categories or types of students needing help.

Evidences

The evidences of our results are:

1. The staff timetables consist of the office hours.
2. The questionnaires done by the students in the academic portal.
3. The follow up of the deanship.
4. The results and analysis of our special questionnaire.
5. The existence of equipped classrooms and a computer lab.
6. The preparatory year plan for the 1st and 2nd levels were attached.
7. One of the students webpage on the university website is attached also the completion of the manual registration needs the academic supervisor approval (the model attached).
8. A statement of one student from his academic supervisor webpage is attached.
9. Samples of the students results from the academic portal and a photo of the department board consists of the midterms exams results.
10. Photos of the library, computer lab and classrooms.
11. The questionnaires of the evaluation of the staff performance by students and the satisfaction of the students about exams are attached.
12. the results of these questionnaires had been analyzed and discussed in the department council.

**Points of weakness:** The following are points which are weak and have to be improved. Under each one we give the summary of the improvement plane.

1) If arrangements for student academic counselling and advice include electronic communications through email or other means the effectiveness of those processes is evaluated through processes such as analysis of response times and student evaluations.
   a) Connect the students with their academic supervisor electronically.
   b) Analyse the results extracted from the system.
   c) All communications between students and their academic supervisor must be done electronically.

2) Adequate tutorial assistance is provided to ensure understanding and ability to apply learning.
   a) Give extra time to those students who facing some problem in understanding the course.
   b) The student should be given unique homework.
   c) Make a criteria for exams that have resemblance with international criteria.
   d) The exam of each faculty members must be reviewed by another faculty member to confirm the criteria.
   e) Specify some international universities that can cooperate with our university to review the confirmation of the criteria.
   f) The reports from these institution must be discussed with the faculty council to put appropriate procedure for improvement and directing the department council about these improvement.
g) Specify some local universities that can cooperate with our university to review the confirmation of the criteria.

3) Preparatory studies are not counted within the credit hour requirements for the program.
   a) Make a recommendation from the department council to separate the Preparatory studies from counting the credit hour requirements for the program.

4) If the language of instruction in the program is not Arabic, action is taken to ensure that language skills are adequate for instruction in that language when students begin their studies. (This may be done through language training prior to admission to the program. Language skills expected on entry should be benchmarked against other highly regarded institutions with the objective of skills at least comparable to minimum requirements for admission of international students in universities in countries where that language is the native language. The benchmarking process should involve testing of at least a representative sample of students on major recognized language tests)
   a) Organize a language course prior to admission in college with making a trial TOEFL/IELTS exams for all students to check ability of understanding English Language.
   b) Some students should be selected randomly to attend a real TOEFL/IELTS exam.
   c) Compare their results in these exams with the requirement of admission for native students in international universities.

5) If preparatory programs are outsourced to other providers the institution accepts responsibility for ensuring the necessary standards are met and entry requirements to the program are maintained.
   a) Specify the principals and basics which must be contained in the preparatory year syllabus.
   b) Review correctness of a random sample of papers.
   c) Follow up the exams works in preparatory programs.
4.7 Quality of Teaching (****)

Teaching methods are illustrated in the course specifications so that they may be consistent with the evaluation methods and learning outcomes. Faculty members are given training in how to forge and implement such methods. Following is a list of the procedures applied by the College, stressing its concern with the quality of teaching.

Teaching is of high quality with appropriate strategies used for different categories of learning outcomes.

Points of Strengths: The following are points which are good enough.

1- Students are strongly informed about course requirements in advance through course specifications that include knowledge and skills to be developed, work requirements and assessment processes.

2- The conduct of courses is consistent with the outlines provided to students and with the course specifications.

3- Textbooks and reference material are up to date and contain the latest developments in the field of study.

4- Attendance list is now taken via e-portal and its policy is made clear to students and compliance with these requirements is monitored and enforced.

5- Courses Reports are provided to program administrators on the delivery of each course and these include details if any planned content could not be dealt with and any difficulties found in using the planned strategies.

6- Effective orientation and training programs are provided for new, short term and part time teaching staff. (To be effective these programs should ensure that teaching staff are fully briefed on required learning outcomes, on planned teaching and assessment strategies, and the contribution of their course to the program as a whole.)

7- Appropriate strategies of teaching are planned and used for the different kinds of learning outcomes the program is intended to develop.
8- The strategies of teaching and assessment set out in program and course specifications are followed by teaching staff with flexibility to respond to the needs of different groups of students.

Evidences

The evidences of our results are:

1. Workshops implemented by E.T.L.U. in the college and the quality and E-learning deanships.
2. The emails of the workshops of the learning outcomes implemented by the department and E.T.L.U.
3. The short and detailed course specifications are attached.
4. A copy of one course specification from the department webpage is attached.
5. The faculty member gives an overview of the course in the first lecture.
6. A course report is attached.
7. The library is enriched periodically with references and text books
8. The students discipline register is attached.
9. Inner committees were formulated for evaluating the courses portfolios.
10. There are some workshops delivered by quality deanship concerning the evaluation of the courses and programs and attendance certificate are attached.
11. Quality matrices (concerning the learning outcomes for each course).
12. The learning outcomes had been determined in the exams sheets (model attached).
13. The results for each learning outcome had been determined in the direct evaluation matrix (model attached).
14. The references are updated periodically.
Points of weakness: The following are points which are weak and have to be improved. Under each one we give the summary of the improvement plane.

1) Appropriate adjustments in plans of teaching if needed after consideration of course reports.
   a) Make a recommendation for quality deanship to summarize the course report, with activating it.
   b) There should be a clear and flexible procedure to improve and modify the plans of each course.

2) The effectiveness of different planned teaching strategies in achieving learning outcomes in different domains of learning.
   a) Arrange workshops for all faculty members about how to choose the suitable education strategies. These workshops should be delivered by experts in the field.
   b) All faculty members should be aware of the teaching strategies in their course specifications.
   c) A random sample in each course should be once collected from the students (according to the well-known universities criteria) to check the achievements of our students.

3) Textbooks and other required materials and their availability in sufficient quantities before classes commence.
   a) Each course edition of textbook must have at least ten copies available in library.
   b) The deanship of library must concise the list of textbooks submitted by the department council.
   c) The textbooks approved by the department council should not be changed at least before two years.

All books recommended in course specification must be placed within the library and have easy access to faculty members.
4.8 Support for Improvements in Quality of Teaching (***)

All newly appointed faculty members involved in learning and teaching delivery attend initial professional development programs, which ensure that they are appropriately prepared for their roles in teaching and research. These programs are conducted by the Deanship of Quality and Skills Development training programs and Deanship of distance and e-learning and E.T.L.U. in College, aiming for developing personal skills for faculty members.

Appropriate strategies are used by the program administrators and teaching staff to support continuing improvement in quality of teaching.

Points of Strengths: The following are points which are good enough.

1. The extent to which teaching staff are involved in professional development to improve quality of teaching is monitored.

2. Training programs in teaching skills are provided within the institution for both new and continuing teaching staff including those with part time teaching responsibilities.

3. Training programs in teaching include effective use of new and emerging technology.

4. Strategies for improving quality of teaching include improving the quality of learning materials and the teaching strategies incorporated in them.

Evidences

The evidences of our results are:

1. A copy of the announcements of E.T.L.U, the quality and E-learning deanships workshops are attached

2. A weekly seminar takes place in the college and monthly one in the department.

3. The registration in all activities is fully automated for all staff members (a copy from the website)
4. The department has its own computer lab and a group of workshops in the basics of computer sciences take place in it.

**Points of weakness:** The following are points which are weak and have to be improved. Under each one, we give the summary of the improvement plan.

1) Opportunities availability for the professional and academic development of teaching staff with special assistance given to any who are facing difficulties.
   a) The deanship must cover the journal publishing charges for publication.
   b) For each published paper there must be a WARD for that faculty member who publishes the paper.
   c) Funding all nonteaching activities like attending and participating in conferences or in scientific visits.

2) Teaching staff development strategies for their own teaching and maintenance a portfolio of evidence of evaluations and strategies for improvement.
   a) Allow and fund anybody if someone wants to go abroad to have an extra course for enhancing on the teaching skills.
   b) The faculty members who get these certificates should arrange some workshops to increase the knowledge of other faculty members.

3) Formal recognition for outstanding teaching, with encouragement given for innovation and creativity.
   a) Standard of recognition and formal appreciation must be clear, realistic and equally based for each faculty member
   b) The prizes should cover all those who satisfy the standard.
4.9 Qualifications and Experience of Teaching Staff (****)

Mathematics department makes at most efforts to hire teaching staff that are appropriately qualified and experienced for their particular teaching responsibilities, use teaching strategies suitable for different kinds of learning outcomes, and participate in activities to improve their teaching effectiveness. It defines specific profiles of faculty members and use as guides in its recruitment process. Teaching staff have qualifications and experience necessary for teaching the courses they teach, and keep up to date with academic and/or professional developments in their field.

Points of Strengths: The following are points which are good enough.

1- Teaching staff have appropriate qualifications and experience for the courses they teach. (For undergraduate and master’s degree programs this would normally require academic qualifications in their specific teaching area at least one level above that of the program in which they teach.)

2- If part time teaching staff is appointed (for example in a professional program where current industry experience may be sought) there is an appropriate mix of full time and part time teaching staff. (As a general guideline at least 75% of faculty should be employed on a full time basis.)

Evidences

The evidences of our results are:

1. The minimum requirements for teaching were satisfied by all the faculty members as it was clear from their employment files in the personnel affairs deanship and the CVs files in the quality unit.

2. There are no part-time faculty members. All of them are fulltime faculty members.

Points of weakness: The following is the weak points that must be improved. Under each we give the summary of the improvement plan.
1) All teaching staff is involved on a continuing basis in scholarly activities to be up to date with the latest developments in their field and can involve their students in learning that incorporates those developments.

   a) The deanship must cover the journal publishing charges for publication.
   b) For each published paper there must be a prize money for that faculty members who publish the paper.
   c) Funding all nonteaching activities like attending and participating in conferences or in scientific visits.
   d) Allow and fund anybody if someone wants to go abroad to have an extra course for enhancing on the teaching skills.
   e) The faculty members who get these certificates should arrange some workshops to increase the knowledge of other faculty members.
   f) Standard of recognition and formal appreciation must be clear, realistic and equally based for each faculty member.
   g) The prizes should cover all those who satisfy the standard.

4.10 Joint operations with other educational institutions (if any).

When there are partnerships with other institutions to assist in planning for and / or implementation of the program what you describe is through these partnerships and explains what has been done to evaluate the effectiveness of those activities.

Evaluation of joint operations (If any) pointing to the evidence and presenting a report which contains a summary of the strengths and areas requiring development and implementation priorities.

All faculty members in the Department of Mathematics are evaluated on their previous year’s performance. These criteria have recently been published on the website of the Deanship of Faculty and Staff Affairs. A standard form is used for performance evaluation; this is familiar to all staff and is usually completed annually by the department chair.
Course Evaluation Surveys developed by the Deanship of Quality are completed online by students at the end of each semester and before obtaining their courses grades. Once the evaluation timeframe comes to a close results can be accessed electronically so faculty are able to view feedback regarding their course in a timely manner this allows them to make modifications to their course before it begins again.

Peer review is an entirely voluntary process for evaluating teaching at Department of Mathematics. This process is to be revised in order to develop a more comprehensive system in order to improve the validity and reliability of the evaluation to ensure consistency and flexibility to highlight strengths in teaching.

**Evaluation of qualifications and experience of teaching staff**

**Strengths**

1. Highly qualified trained faculty members.
2. Recent increase in faculty strength.
3. Reasonable faculty services.

How satisfied are you with the level of education? To what Extent University prepares its students comparing with that you received at the University of Majmaah?

![Figure 15: Quality of education you received at Mathematics Program](image-url)

How satisfied are you with the following elements at the University of Majmaah?
Figure 16: Teaching Quality at Mathematics Program

Figure 17: Teaching style at Mathematics Program
**Figure 18: Curriculum at Mathematics Program**

**Figure 19: The Infrastructures at Mathematics Program**
Figure 20: MU helped me to enter the labor

Graduates of the University of Majmaah is characterized by possessing the technical skills

Figure 21: Possessing of the technical skills
Figure 22: Graduates are characterized by the enjoyment of high work ethics

Figure 23: What skills do you think you are missing from when you join the labor market?

**Overall Evaluation of Quality of Standard 4:**

Continuous and substantial support for teaching and learning activities at Mathematics department is clearly evident. Many institutional initiatives and projects have articulated
this support. For example, the workshops of E.T.L.U and the Deanship of Quality and Skills Development to ensure achieving quality and meeting accreditation requirements. Existence and newly established courses are reviewed at different levels to make sure they meet the relevant MU, NQF and other NCAAA accreditation requirements, where the MU Curriculum Committee - chaired by the Vice Rector for Educational Affairs - oversees the whole process. The department has align its missions with college and university ones, and the program reviewed its mission, objectives and learning outcomes (LO) for alignment. The assessment cycle continue to ensure proper implementation of LOs, and then, use the results for the next improvement plans. Stakeholders and relevant potential work places are somehow engaged in creating curriculums and training students. To help its faculty members fulfilling their educational duties, the department offers a wide variety of training, scientific and professional activities.

**Standard 5. Student Administration and Support Services  (Overall Rating: * ** *)**

The registration and admission should be reliable and fast responding. The standard records must be secretly reserved. The students' rights and responsibilities should be clear and identified. There should be some rules for punishments, which must be clear and transpires. There should be some academic tools for supporting the students. Not only the academic perspectives, but also the extra curriculum activities and anything else the students may need and it can be achieved through those standers.

The college of Science deems the administration and support services for students to be of major importance.
The administration and support services for students are supervised and managed by the Vice Rector of Education and Academic Affairs. Two supportive Deanships are responsible for developing, monitoring, implementing, and following up on the required responsibilities and services. These two deanships are: the Deanship of Admissions & Registration, and the Deanship of Student Affairs.

The Deanship of Admissions and Registration is responsible for students' admissions, which are handled through the electronic Edu-gate and e-register systems. The Deanship of Student Affairs is responsible for all student activities and services, such as academic and social counseling, health services, housing, sports, cultural activities, training, transportation, student rights, and all other services.

The Deanships assign these responsibilities to the colleges through the Vice Dean for Academic Affairs. The responsibilities and regulations at these Deanships are written and approved by various authorities, including the Council of Higher Education and the University Council. Some of these services and regulations are approved internally by the Rector, Vice Rector, or the related Dean.

**Key performance indicators**

1- Ratio of students to administrative staff.

2- The average rating by students on response to the statement "Course registration is organized and easy".

1- The average rating by students on response to the statement "Students supporting services are adequate" in the graduate evaluation survey.

In addition, structured interviews were conducted with the heads of both the Student Affairs Deanship and the Deanship of Admissions and Registration at the University, which added value to the analytical process. At the College level, multiple meetings were conducted with the Vice dean for academic affairs and the chairmen of academic guidance committees. Furthermore, one member of the accreditation committee is also a member of the academic guidance committees.
There is evidence about the performance of Student Affairs department through surfing the student's opinions about the level of these services.

5.1 Accepting Students (Overall Rating: ****)

Operations of Accepting students must be effective; users can rely on them and easy to use for students. The admission process provides students with access to the University but also ensures that all learners are given every opportunity to succeed in their studies, enabling them to attain their personal objectives. Entrance requirements are determined at three levels: the University, the College and the Department. All admission information and policies are described clearly and accurately on these websites and in the Department's Student Catalogues and Handbooks. The following information is available on the websites mentioned above: admission requirements; requirements and responsibilities for enrolled students; degree, certificate, graduation and transfer requirements; suspension, probation, dismissal and re-admission policies; and policies regarding the collection and retention of student academic records and data.

This standard is measuring the achievement of the following:

(5-1-1) Admission and registration Operations is easy to use to students and not time consuming i.e. are simple and efficient (Overall Rating: ****) See (H5. 1. 1).
(5-1-2) Admission Requirements is a regular and fair (Overall Rating: ***): (H5.1.2).

(5-1-3) Information of skills needs study through education about or learning email as before Registration (Overall Rating: ****): (H5.1.3).
**Figure 26: Information of need skills for study through education**

(5-1-4) The Department of mathematics offers Mentors for students who are familiar with the details of the requirements for courses to help students before the start of registration (Overall Rating: ****): (H5. 1. 4).

**Figure 27: Mentors offered for students by mathematics Department**
(5-1-5) Mathematics Department determines Rules of acceptance supported by the hour's previous studies *(Overall Rating: ****)*: (H5. 1. 5).

![Diagram](image)

**Figure 28: Mathematics Department determines Rules of acceptance supported**

(5-1-6) University Administration classifying the students by the courses taken concerning hourly calculated before the start of the study *(Overall Rating: ****)*: (H5.1. 6).
Figure 29: University Administration classifying the students by the courses

(5-1-7) Institution provides a comprehensive record to provide new students

Rating: ***: (H5.1.7).

Figure 30: Availability of the Foundation Information
(5-1-8) All Information about the Foundation is available for all to see

(Overall Rating: ****): (H5.1.8).

Figure 31: Institution provides a comprehensive record to provide to new students.

5.2 Students Records: (Overall Rating: ****)

Students Records are kept in private place, with the importance of actions programmed to automatic transmission of statistics data where the education institute needs to performance requirements for external reports and to prepare reports about the students.

The Department of Mathematics maintains complete and accurate records of all students enrolled from the time of registration to withdrawal or graduation.

These records form a part of the well-organized system of student accounting, which is accessible and reflects the current status of all students. Such records conform to Majmaah university rule and regulation for privacy.
Department of Mathematics’ student academic records are comprehensive, accurate and secure. While such records at Majmaah University are maintained in a central secure location and protected behind firewalls, records are backed up daily and stored securely off site. The confidentiality of the information of each student must be of priority.

This standard is measuring the achievement of the following:

(5-2-1) The University provides effective protection of students records with the need to keep the central files which contain the accepted students records and their performance -On over the years- in safe place (Overall Rating: ****). See (H5. 2. 1).

The university keeps backup records in another place, would prefer to be in a separate place, outside the institution.

![Pie chart showing percentage of responses]

Figure 32: Effective Protection of students' records provided by MU

(5-2-2) The University determines the official and policies instructions of students' records which need to keep and gets rid of other records (Overall Rating: ****). See (H5. 2. 2).
Figure 33: The official and policies instructions of student's records, determined by MU

(5-2-3) The university has the clear rules to control the confidential information and sets the process of access to the individual records (Overall Rating: ****). See (H5. 2. 3).

Figure 34: The University is totally authorized to control the confidential information

(5-2-4) The University achieved officially from fulfilling the student's requirements for graduation (Overall Rating: ****). See (H5. 2. 4).
5.3 Management for students (Overall Rating: ****)

University place Rules and regulations have been made to ensure the existence of procedures for the Management and for students. The Department treats all complaints seriously and responds quickly and fairly to students' complaints and is committed to treating all students in an unbiased and respectful manner. In this regard, the College of Science implemented the Student Rights Protection Unit to implement fair and consistent processes for student management and to ensure that no punitive actions or discrimination is committed. It also advises students in the event of complaints and explains how the policy works. Disciplinary and appeals processes are consistent with the mission and values, both of which promote high-quality education, of the Department and the College.

Effective mechanisms to look into disputes grievances and appeals through independent within the enterprise must be existed by MU.

This standard is measuring the achievement of the following:
(5-3-1) Council Management wrote the adoption of the "conduct rules" which determines the rights of students and their responsibilities and be saved in the available manual within the Enterprise on a wide (Overall Rating: ****). See (H5.3.1).

![Figure 36: The rights of students and their responsibilities were cleared for them](image)

(5-3-2) University Defined regulations and actions that must be taken; this includes the responsibilities and the penalties which may be imposed (Overall Rating: ****). See (H5.3.2).
(5-3-3) The University shall take procedures disciplinary without delay.

(Overall Rating: ****) See (H5.3.3).

University documents all subjects and including the details of the evidence in the records of the official retains undertaken in a confidential place.
5-3-4) The University describes the procedures appeals and grievances that students go through the systems and rules published and known in the educational institute. These Regulations clarify the rules and bases that can be performed by the appeal and grievance procedure for academic to take decisions and reach the possible solutions.

(Overall Rating: ****) See (H5.3.4).

![Pie Chart](image)

**Figure 39: The University describes the procedures appeals and grievances**

(5-3-5) Procedures of appeals and grievances included do not waste time on issues of non-task but give way to fairness for topics of interest to students and support provide services, *(Overall Rating: ****) See (H5.3.5).*
Figure 40: Procedures of appeals and grievances included do not waste time

(5-3-6) Procedures of Appeals and grievance includes addressing issues of impartially people, or committees that do not have parties or even resolution. And to those who expected punishment. (Overall Rating: ****) See (H5.3.6).

Figure 41: Procedures of Appeals and grievance included addressing issues

(5-3-7) The University established procedures that include protecting students from being subject to punishment, injustice or discrimination against them.
(Overall Rating: ***) See (H5.3.7).

![Chart showing survey results]

Figure 42: The University established Procedures

5.4 Students Planning Services and Evaluation: (Overall Rating: ****)

A procedure has been found for effective planning of activities and student's services, and it is supervised and evaluated by administration.

Each student at the Department of Mathematics is assigned a faculty advisor at the time of his initial enrollment. The faculty advisor is available to solve any problem that might arise during the student program. The University considers student advising by faculty as an important teaching-related activity.

The faculty advisor is expected to advise students in planning their academic programs during early registration, and throughout their academic year. The faculty advisor has the following main roles:

1- Advice and help students in their registration.
2. Provide students with clear guidance in dropping and adding courses, and in improving their academic performance.

3. Ensure that the students understand the academic regulations and follow their academic programs in a sequential order.

4. Follow-up students' academic progress, especially those with unsatisfactory performance.

This standard is measuring the achievement of the following:

(5-4-1) Services and resources assigned to illustrate an educational requirements for students. (Overall Rating: ****) See (H5.4.1).

![Figure 43: Services and resources allocated for students.](image)

(5-4-2) The University monitors the effectiveness of Services available for students through surveys to see the benefit of these Services and their satisfaction with it.

The University is revising Student services through the results of the evaluation, and feedback. (Overall Rating: ****) See (H5.4.2).
Figure 44: The University monitors the effectiveness of services and appropriate control.

(5-4-3) University Provides appropriate places and financially support adequate student Services. (Overall Rating: ****) See (H5.4.3).

Figure 45: University Provides appropriate places and financially support adequate student Services.
5.5 Guidance and Medical Services: (Overall Rating: ****)

Educational institution is offering medical Services and appropriate counseling through qualified persons. It also maintains the privacy of students and follow-up the students need to these services.

This standard is measuring the achievement of the following:

(5-5-1) MU is choosing specialists, who have Professional qualifications to work in students services guide and medical service. (Overall Rating: ****). See (H5.5.1).

(5-5-2) Medical Services and counseling are accessible easily, and they are available when needed. medical services provided in the cases of emergency. (Overall Rating: ****) See (H5.5.2).
Figure 47: Medical Services and counseling are accessible easily and be available when needed.

(5-5-3) Academic Guidance, vocational and career guidance in faculties or departments are situated in the appropriate location in the university. (Overall Rating: ****) See (H5.5.3).

Figure 48: Academic, career guidance, and vocational are rooming in the appropriate location
5.6 Non-classroom activities for Students: (Overall Rating: ****)

Education institutes should take necessary steps for the non-classroom activities that are appropriate for students.

This standard measures the achievement of the following:

(5-6-1) The University creates opportunities to do the religious duties according to the regulations (Overall Rating: ****) See (H5.6.1).

![Figure 49: MU creates opportunities to perform religious duties according to the regulations.](image)

(5-6-2) The educational institutes should take necessary actions to organize and encourage the participation of the students in cultural activities, such as participation in clubs, participation in associations, participate in arts events (Overall Rating: ****). See (H5.6.2).
Figure 50: Organize and encourage the participation of the students in cultural activities by MU

(5-6-3) The educational institution encourages students who are skilled in sports to participate in the activities. The institution shall organize competitive and non-competitive activities.

*(Overall Rating: ****) See (H5.6.3).*

Figure 51: Encouraging students who are skilled in sports to participate in activities.

Evaluation of student administration arrangements and support services for students in the program

Department of Mathematics uses the University’s admission system in the form of Edu-gate and e-
Register. This ensures adherence to standard operating procedures. These procedures are clearly documented and applicable to all students so that the same information, admission and acceptance criteria, withdrawal policies, student records’ management, and grievance/appeal systems are applicable and therefore fair to all. Student records are secure, and there are clear rules regarding the privacy of information; these rules ensure that access to student records is strictly controlled. Wide and varied opportunities are available for students to participate in religious, cultural, sporting and physical activities.

**Priorities for improvement**

1- The Department of Mathematics should periodically examine and adjust its admissions policy for continuous improvement.

2- The Department of Mathematics should regularly monitor effectiveness and relevance of services through surveys of student usage and satisfaction; and services should be modified in response to evaluation and feedback.

3- Provide information about the special skills or resources necessary to study the way of distance learning or e-learning prior to registration.

4- There are appropriate policies and procedures to deal with bad academic behavior, including spoofing (steal) the ideas of others and any other type of cheating

5- Provide guidance and create a comprehensive program for new students to ensure full understanding of the types of services and resources available to them, and the duties and responsibilities.

**Proposals for improvement**

1- Examine and adjust Department of Mathematics admissions policy for continuous improvement.

2- Monitor effectiveness and relevance of services through surveys of student usage and satisfaction and modify service in response to evaluation and feedback.
3. The students should be aware of applicable laws and regulations within the organization in commensurate with their plan of study.

**Strength**

1. Students at Department of Mathematics are provided with adequate student's support services.
2. The Department of Mathematics has well-established policies and procedures for students' admission, registration, withdraw, transfer, protecting privacy of information, controlling access to student records, and eligibility for graduation. Students right at Department of Mathematics are protected by rules and regulations.
3. Students at Department of Mathematics are provided with adequate extra curricula activities.

**Areas for improvement**

1. The Department of Mathematics should periodically examine and adjust its admissions policy for continuous improvement.
2. The Department of Mathematics should regularly monitor effectiveness and relevance of services through surveys of student usage and satisfaction; and services should be modified in response to evaluation and feedback.

**Priorities for action**

1. Examine and adjust Department of Mathematics admissions policy for continuous improvement.
2. Monitor effectiveness and relevance of services through surveys of student usage and satisfaction; and modified service in response to evaluation and feedback.
3. The Department of Mathematics should establish policies and procedures regarding the review of student academic performance.
4. A mechanism must be identified and implemented to review and assess the outcomes, in terms of students’ attainments and achievements, of the counseling processes. This will ensure that the beliefs and practices of these processes are actually effective.

Evaluation of student administration arrangements and support services for students in the program. Refer to evidence about the standard and sub-standards within it and provide a report including a list of strengths, recommendations for improvement, and priorities for action.
Standard 6. Learning Resources (Overall rating ****)

Learning resource materials and associated services must be adequate for the requirements of the program and the courses offered within it and accessible when required for students in the program. Information about requirements must be made available by teaching staff in sufficient time for necessary provisions to be made for resources required, and staff and students must be involved in evaluations of what is provided. Specific requirements for reference material and on-line data sources and for computer terminals and assistance in using this equipment will vary according to the nature of the program and the approach to teaching.

Learning Recourses in any educational institution are regarded as the fundamental need of both staff and students. These resources and related services must be adequate to the requirements of the degree program and courses offered in that institution. We try to make a comprehensive report on the Learning Resources available in College of Science specifically related to Mathematics Department. All the information is gathered through discussion with faculty members and students and some recent survey results. Currently College of Science in Al-Zulfi has its own library linked with central library of the Majmaah University under the Deanship of library affairs. This library contains total 680 books (450 in English+230 in Arabic) with mathematical titles. Besides this several publications data bases (about 300), journal subscription websites (about 160000) are available online to help staff and students in their learning.

The department also prepares requests of books and references at the institutional level to be approved by the General Directorate of Administrative and Financial Affairs. Also MU communicates with publishing houses and conducts visits to book exhibitions for the purpose of purchasing material. Part 4 explains articles 7-15 of the library regulations (Procedures of Supply). ( H6-1.1 )

For example, in the academic year 2013/2014, the central library has secured a number of Arabic and English books and references as illustrated in the following Table (T6-1):

<table>
<thead>
<tr>
<th>Resource</th>
<th>Arabic books</th>
<th>English books</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Titles</td>
<td>copies</td>
<td>Titles</td>
</tr>
<tr>
<td>1 Purchase</td>
<td>3944</td>
<td>11832</td>
<td>1794</td>
</tr>
<tr>
<td>2 Gifts(institutions)</td>
<td>105</td>
<td>315</td>
<td>10</td>
</tr>
<tr>
<td>3 Gifts(individuals)</td>
<td>45</td>
<td>45</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4094</td>
<td>12192</td>
<td>1804</td>
</tr>
</tbody>
</table>

Table 6.1

Books has provided to central library in university year 2013/2014 (H6.1).
The table shows that, during the academic year 2013/2014, the university added a number of books amounting to 5988 titles and 17594 copies. Also the present number of printed books in all libraries is (51254). The following table (T6-2) summarizes the increasing number of books and copies extending from 2011 to 2015.

The Library also uses a disposal mechanism as laid out in MU Libraries Regulations (Part 8, Article 32). The said article states that disposing of printed public newspapers and magazines should be carried out on a bi-monthly basis. It also specifies the rate of trust disposal at 2% annually and in cases where the rate exceeds this percentage, approval has to be obtained from the University Rector (Article 33) according to Part 9 of the same regulations (Articles 34, 35, 36) (H6-1.1) Such regulations were circulated to all colleges and are published on the Library website.

### Table 6.2

Increase of the number of books in libraries during the period from 2011 to 2015 (H6.1)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of titles</td>
<td>1709</td>
<td>22743</td>
<td>35081</td>
<td>51254</td>
<td>65304</td>
</tr>
<tr>
<td>Number of copies</td>
<td>50859</td>
<td>85368</td>
<td>105863</td>
<td>144323</td>
<td>177363</td>
</tr>
</tbody>
</table>

The university provides electronic resources through annual subscription, the number of electronic learning resources in 2014 is (239); the following table shows development of subscription of the university in electronic information resources

### Table 6.3
The above table illustrates the continuing development of the number of library subscriptions to electronic data. This proves the concern of MU with learning resources. These services enable library users to have easy online access round-the-clock to all contents whether in Arabic or in English in different disciplines and specializations, including science, medicine, humanities, education, etc.

The library content is controlled electronically by Koha system. This is an electronic system for managing the Central Library and its branches at the different campuses. The system provides periodic reports on the conditions of the libraries regarding books, periodicals, data bases, book borrowing and returning processes, and contents.

Upon planning a new academic program, the university requires provision of a list of books and references to support the teaching and learning process and scientific research (H6-2).

The university, through the Deanship of Library Affairs, conducts specialized workshops and training courses for teaching staff and student so as to maximize benefit from the learning resources. The training courses in the academic year 2014-2015 reached (13) and the number of trainees exceeded 325, and in 2015, the number of courses amounted to (23) and that of trainees exceeded 489 (H6.1). The following table indicates the development of the number of training courses offered by the Deanship to the users.

Table 6.4
1. Description of the processes used to evaluate performance in relation to this standard

We have gathered the data through the review of documents and interviews with students and faculty, website of Deanship of Library affairs, Library of College and electronic questionnaires and the gate of the university.

Key Performance Indicators

1. Stakeholder evaluation of library and media center. (Average overall rating of the adequacy of the library and media center).

2. Number of website publication and journal subscriptions as a proportion of the number of programs offered.

3. Stakeholder evaluation of digital library. (Average overall rating of the adequacy of the digital library).

6.1 Planning and Evaluation (***)

The libraries are considered to be very important learning resources. MU, through its Deanship of Library Affairs, has clear plans and policies (e.g. library affairs regulations (H6.1-1) in dealing with these resources, including necessary procedures for access to printed
and electronic books and references in an easy way via the unified electronic index of MU libraries [http://maktabat.mu.edu.sa].

Besides, these services are regularly evaluated and improved according to the views of teaching staff, whereas the percentage of users' satisfaction has improved from the academic year 2013 to 2.97, in year 2015 to 3.07 show clear evidence of the university’s care for supporting learning resources (H6.1-3).

**Table 6.5**

<table>
<thead>
<tr>
<th></th>
<th>NCAAA KPI Reference Number:</th>
<th>Institutional KPI Reference Number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users' evaluation of library and media center, (Average overall rating of the adequacy of the library &amp; media center, including</td>
<td>S6.1</td>
<td>..............................</td>
</tr>
</tbody>
</table>

**KPI Analysis (list strengths and recommendations):** This indicator is among the key indicators of the university and is one of the National authority for measurement and academic accreditation, which measures the percentage of user satisfaction of library services and media center of the questionnaire have been implemented through the rector for Graduate Studies for the year 2014/2015, were identified objective of the indicator by the University of Dammam.

**Among the most important strengths are:**

- A high level of satisfaction among users of library services;
- University is concerned with learning resources and provision of required financial resources;
- Use of questionnaire results in planning for continuous improvement.

*** Explain:**

1. **Why was this internal benchmark provider chosen?**
   MU Vice-Rectorship of Graduate Studies and Scientific Research since it is institutionally in charge of the Deanship of Library Affairs

2. **How was the benchmark calculated?**
   By electronically surveying users' views on a five-point scale then by calculating the average.

3. **Name of the internal benchmark provider.**
   MU Vice-Rectorship of Graduate Studies and Scientific Research

Despite the attempts to survey the views of users of library services, there is no clearly defined mechanism to conduct such evaluations according to profession, sex, college, program, university, etc. Therefore, the Deanship of Library Affairs is about to complete an
easily available online questionnaires for such purposes.

The teaching staff request their needs of books and references that are necessary for learning and teaching at an early time so as to be provided with. The library staff make sure of the availability of the necessary references for the courses as appropriate. This is explained in the course specifications which are approved by departmental councils.

However, there is no sections in the Central Library or in its branches for reserved books. Yet, the Library added to its policies, particularly in Article 18 of MU Libraries Regulations, a list of the materials that cannot be borrowed, including reserved books. Article 22 of the same Regulations contains the following policies of book borrowing and returning process: (H601-1)

A. Faculty members may ask to reserve books for a specific period of time for students' use within the library; such books may not be borrowed by external users.
B. The head of the borrowing department may impose restrictions on borrowing certain books if there is an urgent need to use them within the library.
C. Borrowing of reserved and other books as described above in A and B will be managed as follows:
- Internal borrowing for no more than two hours by each male or female students, which can be renewed if the said book is not requested by other students.
- The head of the borrowing department may permit borrowing of reserved books one hour before the library closing time, provided these books are returned by 9 a.m. on the following day.

These policies indicate how MU seeks to provide a section for reserved books in its second strategic plan, provided that faculty members are consulted about the books to be reserved according to the requirements of the courses being taught.
It identifies the achievements of faculty members who are responsible for the program and its courses, and it provides advice on regular basis for the required materials to support teaching and learning ($n=45$)

Result of the satisfaction rate with the adequacy of office support and digital information sources to meet the needs of the work which has been done to clarify the resolution of this rate
Describing the identification of the adequacy of office support and resources to meet the needs of the digital information (n=51)

1- Questionnaire shows that 77% of students participating in the questionnaire were satisfied with the service. They also confirmed that the educational resources available in the University of Majmaah Library are necessary for their studies.

2- It also shows evaluation the participation of faculty members and students in determining the adequacy of learning resources and services. And if the extent of using it consistent with the requirements of teaching and learning. The faculty members were asked to identify the resources needed for education and research provided by the deanship of scientific research .These resources are submitted to the Library Affairs Deanship. In addition, the university sells books with lower costs and the department determines the annually required number of books and copies for students. The library situated on the second floor, and it provides easier access to read and to access the required books. It determines the recommended books for them, and recognizing the fact that students need to extend the hours of reading and researching.

The library opening hours must be extended. It currently opens from 8:0 am to 2:0 pm from Sunday to Thursday. It provides collections and materials on regular basis. Digital library project was introduced to the students and that would provide access to books and manuscripts.
The library will also give guidelines about the borrowing of materials as well as fines of delay.

**Figure 55: Describes the identification of easy access to faculty members and officials**

**Figure 56: Questionnaire illustrates the extent of faculty staff deal with customers fairly and equality**
6.2. Organization (****)

Realizing the fact that students need extended hours for reading and research, the college library have extended its daily opening periods which is currently from 8:00 am to 2:00 pm daily from Sunday to Thursday.

The management of the College library is managed by Central Library through electronic system - Koha – which is used to organize, track and retrieve the borrowed books and also submit reports to decision makers about the library. This is implemented in accordance with the book borrowing and returning regulations of Majmaah University.(H6.1-1).

The library restricts materials and references of the courses for reading only and does not allow their borrowing, since it doesn’t have a section for reserved books. The users of learning resources services are able to have quick access to electronic learning resources and materials related to programs through membership in these data bases and journals. The following KPI illustrates the number of 242 in the year 2015Hweb site publication and journal subscriptions as a proportion of the number of programs 242 offered and compares it with those of Dammam University.

<table>
<thead>
<tr>
<th>KPI: Number of web site publication and journal subscriptions as a proportion of the number of programs offered.</th>
<th>NCAAA KPI Reference Number:</th>
<th>Institutional KPI Reference Number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.5</td>
<td>6</td>
<td>3.46</td>
</tr>
</tbody>
</table>
The above KPI shows a large number of MU subscriptions to online data bases in comparison to the number of its academic programs. It must be stated that each data base contains a large number of electronic subscriptions. That is, there are 11,818,484 subscriptions; subsequently, each academic program at the university has about 244,855.511, which is an adequate number for the program needs of electronic data bases. It also makes up for the lack of collaboration agreements between MU libraries and other libraries with regard to exchange of borrowings and service provision. MU is now seeking to enforce these practices through the university Libraries Regulations which is stipulated in Article 16 that data bases can be lent to external libraries within KSA and the Gulf Cooperation Council states in accordance with agreements signed in this respect. (H6.1-1)

MU has set its Libraries Regulations and included in them a part on the rules of conduct (Article 38). It states among other things that library users should:

- abide by the rules of borrowing and returning;
- keep quiet inside library premises;
- avoid eating except in places dedicated for this purpose;
- not give lectures except with an official permission
- avoid misusing library contents and keep the library always clean, etc. (H6.1-1)

The Regulations also contain penalties for users who violate such rules. All violations were related to misusing or losing books. Not a single violation by faculty members was recorded throughout the whole university.

Library collections and materials are acquired on a regular basis based on submitted requests from various academic departments which take into account the teaching and learning needs. These are catalogued and referenced in internationally agreed upon coding systems. Through SDL (Saudi digital library) students and staff have the access to books and manuscripts (electronic copies).

There are clear guidelines governing the borrowing of materials as well as the imposition of fines for late returns. The maximum number of books a faculty member can borrow at a time is 30, whereas a student can borrow 20 books. All books are magnetized and bar-coded to ensure secure systems for loaning. Libraries stock several copies of books to ensure at least one copy is always on-hand for visitors, and materials in great demand are not loaned out for long periods of time. The College library has clearly displayed its codes of conduct for the users, and students are satisfied at the facilities accorded to them.

6.3 Supports for Users (****)
The new Information Literacy Program aims at instructing library users on how to make use of the wide range of different learning resources available. The library orientation is being implemented in the reformed program curriculum and each student is required to undergo orientation to available learning resources including the library. Qualified librarians (3 staff members) are available to help users and answer their questions. Furthermore electronic system is being developed to assist users to search and allocate library collections.

There is a department for reference services. This department introduces services to the beneficiaries, such as direct and indirect reference services and guidance through phone e-mail fax. Facilitate the use of the library through the guidance to the appropriate paper references and the way how to use it. It also helps users to identify reference materials through research in automated system. Held training courses for new students on how to use the library and the automated system in the library.

Questionnaire describes programs to create guidelines and training for students, and to prepare new users for the use of library facilities and services. (n=45)

6-3-2 Questionnaire shows that 88% of students are satisfied with the participants in the questionnaire to provide guidelines and training for students, and to prepare new users for the use of library facilities and services.
Figure 59: Assistance library users to search and access to the information

Describes the identification of assistance to library users to search and access to the information they want and ways to use this information ($n=48$).

Questionnaire shows that 70% of students are satisfied with the participants in the questionnaire to provide assistance to library users search and access to the information they want and ways to use this information.

6.4. Resources and Facilities (***)

The library continuously provides enough material support for accommodating its needs of books, references, other materials and subscriptions in the sources of information. Also, it provides the most up-to-date electronic equipment for the operations of keeping, borrowing and retrieval and providing services. It always seeks to develop the system, as the budget of library has steadily increased from 4.8 in 2013 H to 5.3 million Saudi Riyals in 2015. This budget is enough to supply the library with different materials, equipment and other program needs. At the same time, the university aspires towards further development of the library in light of MU strategic plan.

The library provides the services of electronic borrowing from other libraries while taking into consider not to derogate this from the fulfillment of its commitments. In addition, the library provides proper equipment which makes its contents easily available so as to facilitate the operation of the beneficiary service.
Points of strength

- There is a clear strategy for the sources of learning which is related directly to its providing and accommodating the needs of programs and scientific research.
- The library opens its doors in the morning and in the evening.
- Introducing periodically the advice from the faculty members, who are responsible for teaching the curricula and concerning their need of books and references before the studying start sufficiently in advance.
- The university participation in local, regional and universal databases that are avowed. The ease of access to the electronic information bases and research material and scientific magazines.
- Using authorized electronic systems for registering, restoring and proceeding the movement of books and references. There are authorized security systems which limit the loss of library's contents.
- There are enough books and scientific references in Arabic and English.

Priorities of Improvement:

- Setting a clear mechanism for evaluating library performance and surveying users' views according to job, gender, program, college, and university.
- Adopting a mechanism for the reserved books system and providing a department for it.
- Activating the service of references through efficient experts from the qualified and skilled persons in the fields related to the libraries sciences.
- Making cooperation agreements with the other libraries for mutual desktop borrowings.
- Providing enough number of the qualified and skilled persons in the fields related to the libraries sciences and information technology especially in the branches.
- Providing places for the personal study or for the small groups at the library.

Standard 7. Facilities and Equipment (Overall Rating :***)

Overview

Facilities and equipment must be available for teaching and learning in the department of Mathematics. The use of facilities and equipment should be checked. Then, an assessment should be made on regular basis through consultations with faculties, staffs and students.

The responsible member about this standard will be faculty not program administrators. However, regardless of who is responsible about facilities and equipment, their availability can
have a significant effect on the quality of a program. In this section, comment should be made on issues that have impact on the quality of the program. These issues would include, for example, classroom availability, equipment maintenance, and technical support for IT equipment to meet program needs.

Facilities at the College of Science, including Department of Mathematics, include sufficient space and advanced technology which allow faculty to deliver effective and efficient learning. Also it allows high quality Research-centered teaching through a variety of instructional methods and approaches in a helpful learning environment. As a result, good use of these facilities and equipment enable students to take responsibility for their own learning.

The use of these facilities and equipment are assessed regularly in terms of their suitability for all members, i.e. students, faculties and staffs.

Majmaah University has attempted to introduce policies, so that the planning and maintenance of all its colleges’ facilities and equipment are efficient and useful. Thus, clearly organized processes are available for the possession of facilities, includes tendering processes, procedures for procurement, and invoicing systems to document and track procurement. There is also a documented system in the University for the Maintenance and repair of facilities, as well as a well-defined system for planning and budgeting. It also involves certain academic and administrative units in Majmaah University. In addition, there are six workshops about the maintenance and repair of facilities including research equipment's.

Table 40: Available number of E-podium, smart boards and projectors

<table>
<thead>
<tr>
<th>Campus</th>
<th>College</th>
<th>E-podium</th>
<th>Smart boards</th>
<th>Projectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zulfi</td>
<td>College of Science</td>
<td>52</td>
<td>60</td>
<td>61</td>
</tr>
</tbody>
</table>

Facilities at Mathematics department include sufficient space and advanced technology which allow faculty to deliver effective and efficient learning. Also it allows high quality Research-centered teaching through a variety of instructional methods and approaches in a helpful learning environment (Table 40). As a result, good use of these facilities and equipment enable
Self-Study Report

students to take responsibility for their own learning. The use of these facilities and equipment are assessed regularly in terms of their suitability for all stakeholders, i.e. students, faculty members.

The basic components of this standard are:

- Public policy and planning
- Quality of facilities and equipment
- Management and administration of the facilities and devices
- Information Technology

Comments and a general description of good practice

All those involved in the educational institution, students and faculty members, must be provided consistently with healthy, safe, and attractive environment. It also must confirm to the terms of the normal planning and construction, and the requirements of the high quality teaching and learning.

Educational institution must rely on the use of the facilities, and there are procedures to ensure that utilities can be used for other purposes. A necessary arrangement should be made to protect valuable equipment especially to the one that can easily be damaged.

In programs that require laboratories or technical equipment like computing facilities. There must be effective regular maintenance. There must be a technical support which should be available with the possibility of immediate response in case of equipment damaged.

The classroom should be equipped with all its needs of all media, so that will help to provide effective learning with appropriate technical support.

Performance indicators can be obtained to provide evidence of the quality of the facilities, equipment, and software. Documentation of the planning process surveys can express students'
satisfaction. The availability of equipment compared with other educational institutions offering similar programs, direct observations should be taken into account.

Regular assessment and schedule maintenance should be provided about the quality of the facilities and infrastructure. There should be rules and regulations for the use of equipment and facilities. Moreover, Performance indicators about damaged devices should be available in comparison with other similar institutions.

**Report on subsections of the standard:**

**Policy and Planning**

Representatives must participate in the program for the improvement of facilities and equipment, and to ensure the development of the program. In addition, we should check the provision of facilities and equipment to balance between the needs of the program and policies of the educational institution, in order to ensure compatibility of systems and resources available.

Planning for the provision of facilities including purchase, maintenance and replacement, is accomplished through consulting faculty members and the head of the Department. Then, recommendations on these facilities are forwarded to the college administration; the Dean and the vice Deans, through the Head of the Department. The available facilities are adequate for the Program purposes.

**Table 41: Recent achieved Projects**

<table>
<thead>
<tr>
<th>No</th>
<th>Project</th>
<th>Location</th>
<th>Achievement Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Main Campus Faculty of Science Building</td>
<td>Zulfi</td>
<td>100%</td>
</tr>
</tbody>
</table>
Optimization

The university provides our department a number of laptops. Each faculty member in our department has a laptop computer; in addition, it provides a number of desktop computers to ensure work continuity, so they can avoid some of the faults.

The mathematics department council had been consulted the faculty members in the purchase of books approved the teaching program, and then a group of all books are submitted to the Dean of the College to be provided, taking into account that all the books from the beginning of 2010.

The department makes copies of the records of facilities maintenance for faculty members to avoid faults, and for the continuity of the quality of teaching.

Committee's recommendation

Consulting should be made with faculty members about the equipment before buying them. Also, an arrangement of timetable process should be made for procurement processes, and it should be clear to the members of the faculty.

Laptops are replaced every 5 years to cope with modern software specification and difficulties as it is required by department of Mathematics.

The college provides a sufficient number of important equipment to ensure learning quality, example of this: photocopiers, scanners, printer and colorful printers.

Quality of and convenience of Facilities

Facilities and equipment must have a high degree of quality, with the use of effective strategies to assess the needs of the program for quality and related services (Table 41).
The entrances of the College buildings are helpful to meet the needs of persons with physical disabilities or other special needs. The overall evaluation of the final year students shows to the quality and adequacy of the classrooms facilities.

**Optimization**

The Security and Safety unit Committee in the mathematics department has done a full inventory of the contents of the department for the equipment and facilities that belong to faculty members, students and workers in the new building. We moved to the new building in the beginning of the academic year 1432 - 1433 H. We also construct illustrative maps for faculty offices, classrooms, the public library and the mosque to facilitate access to them.

Computer lab was established for the students in the mathematics program. It aims to prepare place for students to receive for private counseling from the faculty.

**Committee’s recommendation**

Feedback must continue to assess the quality of facilities. And there should be specific strategies to deal with the opinions and respond to them.

The department continued the procedures to improve facilities for students, staff and faculty members with physical disabilities.

The following table shows some of the main learning facilities in the Department of mathematics:

<table>
<thead>
<tr>
<th>Class rooms</th>
<th>Computer lab</th>
<th>Video conference room</th>
</tr>
</thead>
<tbody>
<tr>
<td>*7</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

*7 of them are equipped with smart boards. Besides that, each faculty member has a special office equipped with a PC with required software.
The following Figure shows the overall evaluation of the faculty member to the quality of the classrooms facilities at department of mathematics in Majmaah University.

![Pie chart showing evaluation results](image)

**Figure 60: The quality of the classrooms facilities**

![Pie chart showing readiness for faculty](image)

**Figure 61: The classrooms and laboratories were ready for faculty members.**

The Questionnaire shows faculty’s assessment about the College readiness for the first semester of the academic year - 1432/1433H. And it assured that the classrooms and laboratories they use were ready for faculty members.

**Table 42: Results of some KPIs for the last two years**

<table>
<thead>
<tr>
<th>No.</th>
<th>KPIs</th>
<th>2014</th>
<th>2015</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The overall rate over the appropriateness of facilities and equipment from a faculty survey</td>
<td>62%</td>
<td>68%</td>
<td>80%</td>
</tr>
</tbody>
</table>

Mathematics Department

Zulfi, Faculty of Sciences
<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Degree of fulfillment of the quality of buildings</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td></td>
<td>[32%]</td>
<td>[54%]</td>
<td>[60%]</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Infrastructure efficiency</td>
<td>[65%]</td>
<td>[70%]</td>
<td>[80%]</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Smart operating ratio for the university building and academic units</td>
<td>[64%]</td>
<td>[97%]</td>
<td>[80%]</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Number of Accessible computer per student</td>
<td>1:20</td>
<td>1:8</td>
<td>1:4</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Proportion of hardware and technical equipment availability</td>
<td>[70%]</td>
<td>[75%]</td>
<td>[80%]</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Beneficiaries’ perceptions and opinions about appropriateness of spaces and infrastructure and technology at the university</td>
<td>[40%]</td>
<td>[65%]</td>
<td>[80%]</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Degree of availability of information on the university Web site</td>
<td>54%</td>
<td>75%</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>The proportion of administrative operations that are performed electronically</td>
<td>11%</td>
<td>55%</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Bandwidth per Internet user</td>
<td>100Mb/s</td>
<td>100Mb/s</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Ratio of colleges associated with the high-speed network</td>
<td>80%</td>
<td>85%</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>The level of alignment between colleges in IT services</td>
<td>80%</td>
<td>85%</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Satisfaction level of faculty members and students on electronic services provided</td>
<td>36%</td>
<td>38%</td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Annual expenditure on IT as a proportion of the number of students</td>
<td>1173SAR</td>
<td>1666SAR</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>The number of electronic services provided by the university for its employees</td>
<td>24</td>
<td>257</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>
These, show a steady improvement between 2014 and 2015.

**Safety requirements**

1- The Safety and Security unit in the University provides security and safety system to secure the facilities; Cameras are available in the facilities for 24 hours.
2- Fire evacuation policy and fire drills are practiced in all places.
3- First aid is available in all faculties.
4- The College has emergency plans, safety signs, emergency exit signs and laboratory safety manuals.

Table (T 7-4)

Table 43: KPI: NCAAA KPI Reference Number: S7.1

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1666 SR</td>
<td>1666 SR</td>
<td>1173 SR</td>
<td>670 SR</td>
<td></td>
</tr>
</tbody>
</table>

**KPI Analysis (list strengths and recommendations):** The results of this KPI show that, within two consecutive years, MU gave priority to IT expenditure. The allocated amount is considerably larger than that of the External Benchmark. This is understandable in light of the incompletion of the university infrastructure. * 1. Majmaah University 2013/2014 (MU 2013/2014) is the result of this KPI for the previous year. This Benchmark is chosen to help in the trend analysis 2. This KPI is measured through calculating the University spent on the Information Technology, E-learning and the Admission and Registration Deanships, where was (almost 30 million riyals) relative to the total number of university students, which exceeds 18 thousand students 3. Majmaah University (ViceRectorate). **
# Table 44: NCAAA KPI Reference Number: S7.2

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MU 2014/2015</td>
<td>1:8</td>
<td>1:20</td>
<td>1:1</td>
<td>1:8</td>
</tr>
<tr>
<td></td>
<td>1:4</td>
<td></td>
<td></td>
<td>1:4</td>
</tr>
</tbody>
</table>

## KPI Analysis (list strengths and recommendations):

The number of accessible computer per student increased at a good rate from 0.125 to 0.25. At the same time, we notice that the satisfaction level of faculty members and students on electronic services provided is too low (38%). The Vice Rectorate studied this result and concluded that caused by the provision of most computer terminal to the scientific and health specialty. Care is taken this coming year to allocate more equipment to other specialty, especially for the female sector.

1. Majmaah University 2013/2014 (MU 2013/2014) is the result of this KPI for the previous year. This Benchmark is chosen to help in the trend analysis.
2. This KPI is measured through counting the public use computers for the student available in libraries and Admission and Registration Deanship and computer laboratories in colleges, and then compare the total number of students enrolled at the university, the results showed that the total number of computer reached 2361 and the number of students is 18895 so the average is one device for every eight students, the university was not able to increase the number of devices due to incomplete establishment of all laboratories.
3. Majmaah University (Vice Rectorate).
**

1. This benchmark is chosen respecting many criteria as (number of students, establishment year)
2. This KPI is calculated using the same procedure for the internal benchmark
3. Dammam University.

Table 45: NCAAA KPI Reference Number: S7.3

<table>
<thead>
<tr>
<th>Actual Benchmark</th>
<th>Target Benchmark</th>
<th>Internal Benchmark*</th>
<th>External Benchmark**</th>
<th>New Target Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>68%</td>
<td>80%</td>
<td>62%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

KPI Analysis (list strengths and recommendations): The results of this KPI show that, within two consecutive years, faculty members agreed that facilities and equipment were appropriate for their program needs

*  
1. Majmaah University 2013/2014 (MU 2013/2014) is the result of this KPI for the previous year. This Benchmark is chosen to help in the trend analysis
2. This KPI is measured through counting the public use computers for the student available in libraries and Admission and Registration Deanship and computer laboratories in colleges, and then compare the total number of students enrolled at the university, the results showed that the total number of computer reached 2361 and the number of students is 18895 so the average is one device for every eight students, the university was not able to increase the number of devices due to incomplete establishment of all laboratories.
1. Majmaah University (Vice Rectorate).
2. This benchmark is chosen respecting many criteria as (number of students, establishment year, …)
3. This KPI is calculated using the same procedure for the internal benchmark
4. Dammam University.

**Management and Administration**

Management must have facilities, equipment and support services to ensure effective use of the facilities available.

All equipment's in the Department as well as those with the faculty members are recorded in lists in the main store in the university.

The maintenance of this equipment's is available in the University as well as the workshop in the College. Equipment which is out of service can be replaced according to the University regulations.

Security systems are available to protect privacy of personal and institutional information against electronic threats. Moreover, the equipment is monitored electronically as well as through the security men who are available 24 hours on all exit gates in the buildings of the College.

Cleaning services for the infrastructure in the Department are available and effective.

**Optimization**

The college staff completes lists of equipment needed for cleaning, and to get rid of trash and garbage effectively.

The department committee plans a scheduled Procedure for facilities uses in some other departments. So the department serves most of the scientific departments in the university.
Committee's recommendation

There should be specific and accurate procedures to assess the equipment on a regular basis with the provision of the actual maintenance and the possibility of replacing in the case of strong damaged.

The main equipment needed for the research purposes for faculty members in the Department of mathematics are PC computers, which are available for all faculty members in their offices, and uploaded with required software and connected to internet spots.

Moreover, these requirements are available in the computer labs in the Department.

Information Technology

Computers, software and related support services are available and suitable for the program, and they are managed to ensure effective and safe optimal use.

IT department was an area of improvement in the past, so it is one of the priorities in the strategic plan. Accordingly, significant improvements have been made.

We are successfully implemented the following:

1) Installed the latest hardware
2) Network infrastructure
3) Internet bandwidth expanded and services upgraded
4) Upgraded to smart classrooms in the University.

Each faculty member is provided to a laptop computer and a college wide wireless internet service. Technical Support is provided when needed. Security systems are in place to protect privacy of personal and institutional information and to protect externally introduced viruses.

Optimization

College provides all faculty members with laptops with special software for the smart boards.
There is a computer lab for each department, so all students of the program have access to the Internet.

The college provides internet access to faculty members.

The Mathematics Department organizes some technical workshops among faculty members about how to use some of the sites to improve e-learning.

Committee's recommendation

Opportunities for faculty must be available to give their views regarding the plans for the purchase, maintenance and replacement of equipment and software in the college.

Evaluation of facilities and equipment for the program

1. Computer labs are equipped with computers and software.
2. Classrooms equipped with both blackboards and smart boards.
3. Existence of Video conference rooms.

Student Residences: So far MU doesn't provide residential accommodation for students.

(NA)

Points of strength

- The existence of a plan to develop the infrastructure of the University
- The existence of an electronic system for the projects management
- Future users of facilities or major equipment are consulted prior to acquisitions or development
- Obtaining conformity to international standard certificate (OHSAS 18001) for the laboratories of Faculties of science and Applied Medical Sciences
• Feedback from principal users about the adequacy and quality of facilities are annually gathered and used for continuous improvement.
• The existence of an electronic system for operation and maintenance
• Adoption by the Vice Rectorate of a plan to accommodate people with special needs
• The existence of a public administration for operation and maintenance overseen by a senior university official
• Existence of an effective E-learning system (D2L)

Points need improvements

• Provide adequate facilities for all branches of the university
• Provide a system to monitor the usage of spaces in the university
• Organizing joint use for little use facilities, with appropriate mechanisms to protect the equipment.
• Standards of provision of teaching, laboratory and research facilities have to be benchmarked against equivalent provisions at other institutions.
• Internal information systems should be compatible and integrated with external reporting requirements

Standard 8: Financial Planning and Management (Overall Rating: **)
Financial resources must be sufficient for the effective delivery of the program. Program requirements must be made early, so that they can be considered in institutional budgeting. Budgetary processes should allow for long term planning, for at least three years period. Sufficient flexibility must be effective to deal with an unexpected event. However, there should be personal liability and reporting according to rules and regulations. Most of the responsibility for activities in this standard related to college administration rather than program administration. However regardless of who is responsible, the quality of resources, financial planning and management can affect the quality of the program.
Self-Study Report

The funding for the College of Science is fully supported and provided by the University according to the rules and regulation of the Ministry of Finance. Majmaah University employs recognized governmental and financial accounting policies and procedures to ensure that its financial and accounting processes are properly controlled.

Main components of this standard as applied to educational programs are the following:

8.1 Financial Planning and Budgeting:
Sufficient financial resources must be available to support the effective delivery of the program. This means both maintenance and continuity of activities. And we should keep financial support for new initiatives to develop the program and to improve its quality. Funds are not unlimited, and resources must be effectively managed to avoid waste and to control allocations. And allocations should be ranked from low priority to high priority if possible to seek alternative supplementary funding opportunities.

The budget of the university allocated by the government is the largest. However, the University has also attempted to seek out other sources of funding to support long-term financial plans as mentioned in its new Strategic Plan. As a result, the university is working to develop strategies to diversify its sources in order to reduce its dependence on the government as a single source of funding.

The University will not own money in order to meet unforeseen costs that can impose certain constraints. Furthermore, funds allocated for a particular purpose must be used for that purpose only. And the University’s accountants must clarify this. All university expenses must meet the regulation of the finance ministry.

It will be achieved through:

1) Proposals for new programs, major program changes, and other activities with financial implications, equipment or facilities are accompanied by business plans. It includes independently verified cost estimates and cost impacts on other services and activities.
2) If new projects or activities are financially supported from existing funding. The strategy cost is made clear and intermediate. Costs and benefits are assessed on both long and short term.

3) The financial resources is available for the program and sufficient for good quality program provision, and it is compared with the costs of equivalent programs at other similar institutions.

4) The program coordinator/manager or Dean submits annual budget proposals setting out detailed program requirements, and he follows up necessary adjustments after those proposals have been considered.

5) Providing a special budget for the department to support the program and its development.

6) Establishing a committee to determine the needs of the program and submit them to the concerned authorities to estimate the cost.

7) Providing a budget for scientific research in the department and put a specific mechanism to support scientific research in the department.

8.2 Financial Management

The standard of financial planning and management is related not only to the adequacy of funding, but also to the efficiency and flexibility of financial management by program managers. For this flexibility and for appropriate accountability, specified levels of expenses should be provided to be authorized by the program manager, and it is subject to reporting and accountability requirements. Regular management reports should be provided to the program manager from the financial accounting system to allow monitoring of expenses in relation to planning budget.

The Vice-rector’s authority is delegated to the General Manager of Finance Department regarding the supervision of all financial affairs and the application of all the governmental accounting procedures. The Finance Department manages the University’s independent
budget, which include endowments, research chairs, etc.). The Accounting unit of the Financial Directorate must ensure that funds provided for a particular purpose are used mainly for that purpose; the Division also verifies that this has occurred. A quarterly report is submitted by the Finance Directorate concerning expenses and commitments which outlines differences between projected and actual expenses; individual reports are prepared for each organizational unit as well as for the University.

It will be achieve through:

1- Delegation from authorized person must be given to the program manager for effective program administration.
2- Any financial delegations should be clearly specified and accompanied by appropriate accountability and reporting processes.
3- The program manager/head of department must be involved in the budget planning process.
4- The accounting system provides accurate and continuing monitoring by the program manager of expenses and commitments regarding budgets.
5- If there is a conflict of interest exists, either actual or perceived, the person authorized should declare his interest and refrain from participation in decisions.
6- Financial procedures should be sufficiently flexible for long term planning to avoid various expenses or disincentives at the end of the year.

Evaluating Majmaah university’s financial planning and management system showed that the University budgeting and resource allocation process reflects its mission and goals guided by its five-year plan. The government allocated budget is the largest component of the University’s income. However, the University is encouraged to develop strategies to diversify revenue through a range of activities and to reduce its dependence on a single funding source. The University monitors cash ratios continuously through the distributed books by Finance Directorate. There are also variations between colleges and departments in terms of their allocations (salaries, wages, and allowances). The University financial affairs are subject to internal financial auditing through the auditing division of the Finance Directorate, and external financial auditing processes through the Ministry of Finance and General Auditing Bureau in Saudi Arabia.
At the College level, most of the funding comes directly from the university through various sources. All salaries are paid directly to staff. For all IT related services and equipment's, this is funded from the IT deanship at the university. For all e-learning material it is funded through the learning deanship. Similarly, most faculty development activities are funded through the deanship of faculty development. Other daily expenses are covered by the university through a special budget.

**Strengths**

- Majmaah University is getting great deal of support from the government, and it gets a comparative advantage compared with other universities.
- The University financial affairs executive rules are comprehensive and written in clear and practical terms. The University financial affairs organizational structure ensures a clear division of work.
- The University financial planning process is linked with its Mission and its goals, and is guided by the University’s practical plan.
- The University employs an efficient internal and external financial auditing process which ensures good control and monitoring of the financial affairs.

**Areas Requiring Improvement**

- Mathematics Department does not have financial independency to cover its day-to-day financial expenses. It is also consistent with Majmaah University modern approach for strategic development and planning. The University should undertake restructuring of its financial planning and management system in order to delegate some level of financial independency of the colleges.
- The financial affairs should initiate formal cost-benefit and cost-effectiveness analyses for proposed projects and programs.
- The financial planning processes should include independently verified risk assessment.
- Establishing a financial benchmarking process at college and university level.

**Priorities for action**

Majmaah University should delegate some level of financial independency to the Department of mathematics in order to cover its annual operational expenses

- Restructuring of Majmaah university’s financial planning and management system in order to delegate some level of financial independency to the college through items of its annual operational expenses budgets.
- Initiate formal cost-benefit and cost-effectiveness analyses for proposed projects and programs.

**Standard 9. Employment Processes (Overall Rating: ****)**

Teaching and other staff must have the knowledge and experience needed for their particular teaching or other responsibilities and their qualifications. Experience must be verified before hiring them. New teaching staff must be thoroughly notified about the program and their teaching responsibilities before they begin. Performance of all teaching and other staff must be regularly evaluated, with outstanding performance recognized and support provided for professional development and improvement in teaching skills.

Most of the responsibility for activities in this standard related to college administration rather than program administration. However regardless of who is responsible, the quality of resources, financial planning and management can affect the quality of the program. In this section comment should be made on employment matters that affect the quality of the program regardless of who manages them or determines the policies that affect them. These matters include at least hiring qualified faculty, their participation in relevant professional development and scholarly activities, and their preparation for participation in the program.

1-Explanatory note about recruitment and other employment activities is related to this standard.

In line with King Saud University plan, and international standards for the recruitment, MU followed the same strategy. It aims to develop the performance of an employee or a member of the faculty or in the selection of faculty members, particularly non-Saudis, and it trained him on the latest modern technology. Moreover, it sends them to the local, regional and international conferences to develop their career. The University assesses regularly and give reward to distinguish outstanding work.

The Department of Mathematics has made considerable progress in terms of improving the quality of its workforce by providing personal and professional development opportunities through workshops. Workshops offered regularly by the Deanship of Skills Development; faculty members are also encouraged to attend international conferences and/or training abroad. KSU as a whole has progressed in rewarding outstanding academic and administrative performance by introducing and publicly announcing outstanding performance awards.

Key performance indicators

- Distributions of faculty members leaving the Department in the last year for reasons other than age retirement.
- Distributions of faculty members participating in professional development
activities during the past year.
2. Describe processes used to consider quality of performance in relation to this standard.

The members of Development and Quality Committee and Assessment and Accreditation Committee were involved in evaluating this standard. In order to achieve their goal they did the following:
1. Reviewed the University KSU based on this standard
2. Reviewed all employment policies and procedures
3. Reviewed all the faculty staff statistics from the College
4. Reviewed all the documents of the faculty improvement unit
5. Discussed with the Vice Dean all the issues and difficulties concerning the Employment process of distinguished faculty.

Report on subsections of the standard:

**9.1 Recruitment (****)**

9.1.1 To ensure a high level of the studies and to reach to international label, the College has adopted a politicize of an intensive recruitment process from many regions worldwide. Specific areas of expertise have been taken in account in this process. The College in view to create a Master of Mathematics, proceeds to endow the department of Mathematics with a certain number of associate professors and professors. Almost the majority of the academic staff members have an important experience and skill meeting the teaching and research requirements. The number of papers published during the academic year by the department is more than 30.

9.1.2 As soon as the candidates for employment are recruited, the College and the department provide them with full position descriptions and conditions of employment, together with specific information about expectations for contributing to the program as part of the teaching team. The deanship organize each week a meeting to explain and to help the academic staff to improve their skills in view of the needs of the College and the different departments (The subjects of the meetings include details of employment expectations, indicators of performance, and processes of performance evaluation.)

9.1.3 References are checked, and claims of experience and qualifications verified before appointments are made.
The majority of the academic staff employment processes are centrally managed by the Deanship of College and Staff Affairs Administration. The Deanship encompasses in its facility many departments. In this process the references are minutely checked. The deanship to ensure the success of the operation of recruitment prefers to cooperate with governmental agencies. An important delegation goes each year to visit many countries where the candidates are directly auditioned by the members of the delegation. The embassies of the KSA in the different regions worldwide ensure the verification of the authenticity of all the documents presented by the candidates.

9.1.4 The assessment of qualifications are checked by the delegation and then by the department its includes the verification of the standing and reputation of the institutions from which they were obtained, taking account of recognition of qualifications by the Ministry of Higher Education.

9.1.5 In professional programs there are sufficient teaching staff with successful experience in the relevant profession to provide practical advice and guidance to students about work place requirements.

<table>
<thead>
<tr>
<th>Professors</th>
<th>Associate Professors</th>
<th>Assistant Professors</th>
<th>Lecturers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4</td>
<td>16</td>
<td>9</td>
</tr>
</tbody>
</table>
9.1.6 New teaching staff are given an effective orientation to the institution to ensure familiarity with the institution and its operating procedures, services and priorities for development. To make this action very efficient, the college organizes a weekly workshop where many questions are discussed related to the teaching and advising missions. All the academic staff members are continuously invited to participate to some other meeting organized by different Deanships of the University.

9.1.7 New teaching staff are given a thorough orientation to the program to ensure that they have a thorough understanding of the program as a whole, of the contributions to be made to it through the courses they teach, and of the expectations for coordinated planning and delivery of courses and evaluation and reporting requirements.

In the department the unit of program repartition and workloads prepare in general its repartition one term in advance to ensure that the level of provision of teaching staff is very adequate for the program and highly benchmarked in view of the staff ratios practiced in
international institutions. Although the department intervenes in almost a significant number of courses in various departments of the College; the fact remains that the load of the teachers is respected well.

<table>
<thead>
<tr>
<th>Number of staff members</th>
<th>23</th>
<th>10 students/ staff member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students</td>
<td>230</td>
<td></td>
</tr>
</tbody>
</table>

9.2 Personal and Career Development (***)

9.2.1 The criteria for performance evaluation are not very clearly specified or are not so objective.
- The evaluation by the students of the course the teacher does not take in account the difference between the qualities of the student. To be objective this evaluation must be multiplied by a coefficient calculated in direct relation with the level of the students.
- The evaluation of the department cannot be only made by the head of the department; in some cases the judgments were so subjective and so no realistic.
- The evaluation of the quality of exams is always falsified by the context and the conditions where this evaluation is made: just after the examination some students are tired, other are in stress. We have seen in the most cases the student filling the form without understanding the questions posed.
- The evaluation of the exams is made without taking in account that the program are often very large, the quality of the students, etc…

9.2.2 The consultations about work performance are not confidential but are supportive, and occur on a formal basis at least once each term. The deanship invites each academic staff member to improve the principal weakness. These consultations must offer the possibility to each person to introduce an appeal when he thought that his evaluation is not objective.

9.2.3 When any academic staff member’s performance is considered less than satisfactory a set of recommendations and clear requirements are established for improvement. In the department all the academic staff members must continuously present many plans of improvement:
- Course improvement plan.
- Teaching methods improvement plan.
9.2.4 Unfortunately the formal performance assessments of teaching staff are not kept confidential. Although there are often well documented and retained, there is no way to have the opportunity to make or to introduce an appeal or include their own comments relating to these assessments, including points of disagreement.

9.2.5 Every year Majmaah University offers many awards and prizes to outstanding academic and administrative performance. An annual award under the title "the Rector's Award for Quality and Excellence" is intended to motivate and encourage university academic staff to improve their performance. A number of criteria have been set for the award so that it is won by outstanding university academic staff. The award is given to the top three positions including faculty and staff members. Another award for e-learning under the title "The Rector's Award for Excellence in E-learning" is given to distinguished faculty members in five different specializations in e-learning. The Rector's Award for Outstanding Subsites and Faculty Members and Employee's Website is given to distinguished websites. Moreover, several other awards and prizes are offered by deanships and colleges such as the Ideal Employee Award at the Deanship of Students' Affairs, and the Ideal Employee Award at the Deanship of Quality and Skills Development. Furthermore, the University Administration represented by His Excellency the Rector and the Vice-Rectors honour outstanding faculty and staff for their excellent performance in several activities and their role in university achievements.

Table 46: For the department of Mathematics

<table>
<thead>
<tr>
<th>Name</th>
<th>The award</th>
<th>Prize</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Khaled Al Halow</td>
<td>The research activity</td>
<td>Financial Prize</td>
</tr>
<tr>
<td>Dr. Mohamed Harzallah</td>
<td>The research activity</td>
<td>Financial Prize</td>
</tr>
<tr>
<td>Dr. Mohamed Hassine</td>
<td>Ideal academic staff member</td>
<td>Certificate</td>
</tr>
<tr>
<td>Dr. Mohamed Saadani</td>
<td>Ideal academic staff member</td>
<td>Certificate</td>
</tr>
<tr>
<td>Dr. Khaled Al Halow</td>
<td>Ideal academic staff member</td>
<td>Certificate</td>
</tr>
<tr>
<td>Dr. Salah Khafaji</td>
<td>Ideal academic staff member</td>
<td>Certificate</td>
</tr>
<tr>
<td>Dr. Ahmed Moasri</td>
<td>His action in accreditation application</td>
<td>Certificate</td>
</tr>
<tr>
<td>Dr. Ahmed Zedane</td>
<td>His action in accreditation application</td>
<td>Certificate</td>
</tr>
</tbody>
</table>
During the ceremony organized by his Excellence The Rector in honor of the obtaining of the ASIIN accreditation by the College, all the academic staff members received a certificate in reward to their total implication in the success in this mission.

9.2.6 In view of the high studies rules and reglementations, only the Saudi academic staff members have the opportunities to develop their career. In accordance of the recent unifications of rules between Saudi and non Saudi employees in many sectors (Banks, Interior Ministry, ...) the university must unify its rules for Saudi and non Saudi to create a certain form of stability of its employees and then to reach a real high level and international norms. In Europe, USA and many developed countries only the performance is considered in offering a possible opportunities for personal and career development.

Table 47: Academic staff members in formation abroad

<table>
<thead>
<tr>
<th>Name</th>
<th>Experience</th>
<th>Prepared diploma</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sayer Al Harbi</td>
<td>2 years as a lecturer</td>
<td>PHD</td>
<td>England</td>
</tr>
<tr>
<td>Mograne Al Mograne</td>
<td>2 years as a lecturer</td>
<td>PHD</td>
<td>England</td>
</tr>
<tr>
<td>Ahmed Zemami</td>
<td>2 years as a lecturer</td>
<td>PHD</td>
<td>USA</td>
</tr>
<tr>
<td>Frh Al Anzi</td>
<td>2 years as a lecturer</td>
<td>PHD</td>
<td>USA</td>
</tr>
<tr>
<td>Mohamed Al Ghozzi</td>
<td>1 year as a lecturer</td>
<td>Master</td>
<td>England( finished)</td>
</tr>
<tr>
<td>Naïf Bougarnine</td>
<td>1 year as a tutor</td>
<td>Master</td>
<td>England</td>
</tr>
<tr>
<td>Baddah Al Baddah</td>
<td>1 year as a tutor</td>
<td>Master</td>
<td>England</td>
</tr>
<tr>
<td>Yacoub Al</td>
<td>1 year as a tutor</td>
<td>Master</td>
<td>CANADA</td>
</tr>
</tbody>
</table>

The department has during all the last years encouraged and offered the opportunities to junior teaching to go abroad to complete their formation and training. In general this opportunity is offered after one to two years accomplished as a lecturer or a tutor in the department during which the junior can fix his ideas related to the formation he is looking for. In almost all the cases the seniors help them in this choice and recommend them to the desired universities. For the non Saudi academic staff members the University seeks development of such members' skills by organizing internal training courses to prepare them for future. Many career promotion and advancement have been made by the university. The University has established a Deanship for Quality & Skills Development which plays a major role not only in organizing the workshops and seminars. MU must establish a policies to encourage all the academic staff members to engage in a variety of professional workshops, meetings, and conferences world-wide, which will enhance their teaching and research capabilities.

9.2.7 The Deanship of Research affairs is the only institution which encourage intensively the academic staff members in their research activities by supporting the fees of publication, by grants. This assistance must be improved to include all the activity (the number of accepted
project doesn’t exceed 2 by person, in Dhahrane University there is no limitation of the number of supported projects.

9.2.8 As we have said in the previous points many actions are made both by the university and the college to bring appropriate professional development activities to provide and assist a good application of any revision of the programs and/or policy initiatives.

9.2.10 The different committees permit to all the teaching staff to participate in activities that ensure they keep up to date with developments of both the level of the department and the skills related to their own field and the extent to which they do so is monitored by the rules of the university and the college.

3. Evaluation of employment processes for the program.

Summary of strengths
1) There is a well-developed employment process.
2) Credentialing of all employees is checked and verified.
3) The college has been able to attract distinguished staff with high international scale.
4) Faculty members at The Department of Mathematics participated in skills development programs.

Areas for further improvement

1. Suitable arrangements should be made to conduct interviews of all applicants.
2. Faculty and staff should be informed formally (in writing) of what is expected from them and how exactly this will affect their evaluation.
3. Confidential consultations are needed on regular basis (at least once a year) to discuss work performance and the means to attain expectations.
4. Faculty and staff evaluations should be in detailed and reflect reality.
5. Evaluations should be accessible to all faculty and staff.
6. The Department of Mathematics realized the lower participation of faculty members in The Mission statements of the Department of mathematics on three pillars: Education, Research and Community Service. Research as one of the main pillars of the mission of the College of Science has reflected in at least four of its strategic priorities, namely:

   Strategic priority 1: To Achieve higher Education, Scientific Research, and Community Service.
   Strategic priority 3: The Optimal Use of Resources and Modern Technology
   Strategic priority 6: To Establish Effective Partnerships Locally and Globally.
Priorities for action

Suitable arrangements should be made to conduct interviews of all applicants
The Department of Mathematics should has a systematic plan to involve all faculty members
and supporting staff in skills for development programs.

Standard 10. Research Overview (****)

The mission of the Department of Mathematics stands on the three pillars of
1- Education,
2- Research,
3- Community service.

In spite of the fact that Department of Mathematics was mandated to give priority to the
teaching, its involvement in research activity has been improving.
Department of Mathematics has recognized these trends and at the same time realized the
important role that scientific research plays in reaching these goals.

Accordingly, Department of Mathematics has adopted strategic plans to make it more
proactive in scientific research.

Department of Mathematics aspires in the near future to become more active in scientific
activities through increasing the total number of annual research publications, research centers
and scientific chairs. It also aspires to increase its existing modest international exposure
through research collaborations and visiting scholars from around the world.

All faculty members will participate in some form of career development annually and, as a
minimum, it is expected that they will remain up-to-date in their specialist field. Those
developments should be reflected on their teaching. Teaching Staff in post graduate programs
or higher degree research students must be actively involved in research in their field. Facilities
and equipment must be available to support the research activities of teaching staff and post
graduate students to meet these requirements in areas relevant to the program.

Staff research contributions must be recognized and reflected in evaluation and promotion
criteria.(Expectations for research will vary according to the nature and mission of the
institution and the level of the program (ex. College or university, undergraduate or
postgraduate program). In this section, comment should be made on the extent and quality of
research activities of faculty teaching in the program, and on how their research and other current research in the field are reflected on teaching.)

1. Explanatory note about nature and extent of research activities associated with the program or carried out by staff teaching on it.

Research, as one of the main pillar of the Department of Mathematics mission, has been reflected in the four strategic priorities of the Department of Mathematics namely:

1. To provide an academic service of high quality and accreditation in compliance with the national and international requirements in order to develop the skills of students to be able to compete in the work market.

2. To develop the manpower and intellect of the university (quantity and quality) to achieve a high level of quality and excellence in the field of education, research and community service.

3. To upgrade the efficiency of institutional performance as well as develop the infrastructure and technological environment to support the shift to electronic transactions, which will eventually serve the achievement of the university message and objectives.

Therefore, Department of Mathematics has established a Deanship of Scientific Research to facilitate the research progress.

Scientific Research Strategic Plan:

The Department of Mathematics Research developed its strategic plan on basis of the four strategic priorities of the Department of Mathematics

**Research priorities 2015/2016**

Department of Mathematics organized a series of workshops to identify research priorities in accordance with its strategic plan.

These priorities have been published on the Department of Mathematics website to encourage faculty members to carry out their scientific researches according to them

1. Topology and Algebra
2. Linear programming
3. Probability
4. Complex Numbers
5. Other areas:
   a) computers,
   b) Robot, and
   c) Applications of nanotechnology.

Research reputation of the Department of Mathematics:

Despite the fact that Department of Mathematics is an all branch in Mathematics

It has been evidenced that the number of publications are growing with an accelerated rate. As shown in Table

<table>
<thead>
<tr>
<th>1.</th>
<th>Name of the researcher</th>
<th>Numbers of papers in ISI</th>
<th>Other Journals</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dr Khlaf</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>Dr Ramadan</td>
<td>7</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>Naveed</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Kamal</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Dr wasem</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Dr Omar</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Dr Salah</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>Prof Hakiem</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>Dr farooq</td>
<td>13</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>10</td>
<td>Dr Sjaad</td>
<td>13</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>11</td>
<td>Dr Aba-aallah</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>44</td>
<td>17</td>
<td>61</td>
</tr>
</tbody>
</table>

According to the Web of Knowledge of Thomson Reuter database, the number of publications reached 61 until the year 2015

Furthermore, the number of publications in journals indexed in SCOPUS and other...
10.1 Institutional Research Policies: (****)

Department of Mathematics developed its research strategic plan and determined its research proprieties on the basis of its mission,

The strategic plan shows in details the objectives of each of the four strategic priorities mentioned above including their key performance indicators.

As a result, Department of Mathematics established three research centers and one research unit, provide them with scientific and financial support to perform their research, and publish their work. More specifically, the centers receive faculty member proposals and organize the process of reviewing research proposals internally and externally based on specific mechanisms and standards determined by each center.

Taking into consideration all ethical standards in the field of research, publications, and translation

The Department of Mathematics:

1) Introduced more research projects to the of King Abdel Aziz City for Science and Technology (KACST).

2- Department of Mathematics Help all staff from processes starting from submitting of research proposals and ending with publications.

3- The outputs of research at Department of Mathematics has been published in different outlets,

4- some are published in journals indexed in Thomson Reuters and SCOPUS, while others are published in referred peer review journals. According to Google Scholar,

5- The number of publications of Department of Mathematics (based on the various affiliations as: Department of Mathematics, Al Department of Mathematics, Al-Department of Mathematics) reached 44 by the end of the year 2015.

Involvement of the students:

The MU is not providing support for research projects for University students. There is not enough time, and the library doesn't have references or book to do a remarkable project.
Moreover, the university doesn't support scientific research, and doesn't have a program for master or Ph.D. as it is developing university

IN Mathematics department, seven members supported research and accepted projects are:
- Dr. Mohamad Ramadan examine single in 1435-1436H,
- Dr. Mohammed Mohammed Khalaf and joint research in 1435-1436H,
- Dr, Salah Khafagy, examine single in 1435-1436H,
- Dr Mohammed Abd-Elhakiem and joint research in 1435-1436H,
- Dr Omar Hassan , and abd el Nasser joint research in 1435-1436H,
- Dr Rabeh kalell and joint research in 1435-1436H,
- Dr Ahmed Elmoasry research in 1435-1436H,

Research Laboratories:

In each department of the College of Science, there are research laboratories that are fully equipped with the latest and most sophisticated equipment and experienced staff and technicians to accomplish the mission of the College in research. The required Laboratories for the Department of mathematics are the Computer Labs.

Table 48: List of research laboratories in the Department of mathematics

<table>
<thead>
<tr>
<th>Department</th>
<th>Research Labs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>One Computer Lab includes 25 computers</td>
</tr>
</tbody>
</table>

MU has signed collaborative agreements with 3 well known scientists in the field of mathematics through “Distinguished Scientist Fellowship Program (DSFP). These professors collaborate with faculty members in the domain of research as well as introducing several seminars in the Department every year.

2- Description of process for preparation of report on this standard

The members of the postgraduate Study and Research Committee were responsible for the evaluation and preparation of the report on this standard. To achieve their goal, they started their task by reviewing:

Involvement of the teaching staff at the Mathematics Department:

Most academic staff is graduated from world top universities. Researchers are familiar with research methodology and techniques. In 2015 (1437H) full-time faculty of the department published 1015(1437H) manuscripts in ISI indexed journals. The ratio of ISI publication per
Table 1: Total articles, number of faculty of Science in each department and ratio of publications

Table 49: No. of Publications in department of Mathematics

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>14</td>
</tr>
<tr>
<td>2012</td>
<td>15</td>
</tr>
<tr>
<td>2013</td>
<td>39</td>
</tr>
<tr>
<td>2014</td>
<td>39</td>
</tr>
<tr>
<td>2015</td>
<td>61</td>
</tr>
<tr>
<td>Total</td>
<td>260</td>
</tr>
</tbody>
</table>

Total articles, number of faculty of Science in 2011-2015.

Figure 1: publications for all Departments
Involvement of the teaching staff at the Mathematics Department:

Most academic staff is graduated from world top universities. Researchers are familiar with research methodology and techniques. In 2015 (1437H) full-time faculty of the department published 1015(1436H) manuscripts in ISI indexed journals. The ratio of ISI publication per fulltime (staff).

In 1435H, the Faculty of Science and its researchers has great participation of the University Awards for outstanding in scientific publications. The college gets the first place in the scientific productivity in MU. The Department of Mathematics came second.

MU encourages and supports the junior Saudis faculty members to establish and to develop their research programs. "Pioneer Program" is one of the initiative programs supported by Deanship of Scientific Research that aims to generously support the junior faculty members to carry out high-quality research projects evaluated and reviewed by national and international peer reviewers.

Research Deanship states that the priority of the Deanship is to encourage faculty members to conduct research and to find ways or channels to encourage individuals and institutions to support and fund their research projects.

University of Majmaah support for scientific research is very limited, and it does not encourage faculty members to attend international, local and regional conferences, and it doesn't have graduate programs for MSc and PhD students.

**Research Groups:**

Department of Mathematics decided to establish five groups Research one Unit for basic sciences research in order to achieve its goals and to contribute in developing the scientific research which has an immense role in developing the society at all levels. In addition, Department of Mathematics provide faculty members with scientific and financial support for their proposals. The five groups are:

**Group (1)** Dr mohammed khalaf, Dr naveed yaqoup and El moasry

**Group (2)** Mohamad Ramadan, Dr khaled El helo and wasem El haq

**Group (3)** Dr, Salah Khafagy, and Dr Mohammed Abd-Elhakiem

**Group (4)** Dr Omar Hassan, and Dr zedan

**Group (5)** Dr Rabehek kalell and Dr Abd el monem
10.2 Teaching Staff and Student Involvement in Research (***)

The regulations of Department of Mathematics governing the promotion and evaluation of faculty members emphasize the yearly involvement of full time faculty in research activity and, evaluate promotion based on research publications presented by the candidate. Manual of Department of Mathematics research publications is shown in . 2 faculty members obtained promotion to higher levels in last academic year.

Basic research requirements in the Department are the computer labs, PC in the staff offices, e-databases and e-journals. The Central Library subscribed to a large number of databases and scholarly e-journals which can be accessed through the libraries.

Security policy and arrangements are carried out in coordination with the department of security and safety of the university. In order to accomplish these objectives, the following safety measures are usually taken in all facilities:

1-Security: the Department of Safety and Security provides security systems to secure the facilities, Cameras are available in the facilities for 24 hours.
2-Fire Safety: Fire evacuation policy and fire drills are practiced in all laboratories,
3-First Aid: First aid kits are available in all laboratories
4-Personal Protective Equipment: Laboratories are equipped with personal Protective equipment according to the needs in every laboratory such as coats, masks, safety goggles, safety gloves, earmuffs, and helmets.
5-Others: The College also has emergency plans, safety signs, emergency exit, signs and laboratory safety manuals. Finally, safety aspects are taken into consideration when purchasing new machine and equipment.

All equipment is regularly maintained through a very detailed system supervised by the college through workshops, and the website of the college of Science: These workshops are Carpentry workshop, mechanics workshop, electronics workshop, glass workshop, blacksmith shop, plastic workshop. The electronics workshop is concerned with the maintenance of all electronic devices. A form should be filled out to perform the maintenance for any device.

In general, funding for research is achieved in the Mathematics Department through one of the resources
Table 50: Sources for research funding and approximate funding 2015

<table>
<thead>
<tr>
<th>Sources</th>
<th>Department</th>
<th>Funding in Riyals</th>
<th>No. of projects Funded</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Majmaah University</td>
<td>Mathematics</td>
<td>286000</td>
<td>13</td>
<td>1435-1436H</td>
</tr>
</tbody>
</table>

In spite of all the above, research infrastructure needs more improvement in the college especially in terms of supporting staff. Jobs for researchers, research assistants, and lab technologists have been hired.

Also, in 2015 try Department of Mathematics publish one paper with one of the student in Science international journal (ISI indexed)

Department of Mathematics gives awards and allocates incentives for distinguished research of high-quality international publications by faculty members. To achieve quality of research and encourage talented researchers

Department of Mathematics assigned the following types of awards:

1) Distinguished Paper Award
2) Distinguished Researcher Award
3) Distinguished Department Award
4) Innovation Award

Also in the university share with the department by

MU supports several programs to encourage and support faculty members in their research and enhancing publications in indexed journals (H10-1).

: Deanship of Scientific Research website

H10-1: Deanship of Scientific Research website
There are seven active programs as follows: Distinct research groups”.

1) Program of “Supporting outstanding research
2) Program offering “Support distinguished publishing in in
3) Program of "Publishing in ISI journals''.
4) Program of "Ra' ad''.
5) Program of "Postgraduate students".
6) Program of "Undergraduate students".

KPI Analysis:

The Department of Mathematics has not achieved its target in terms of Number of citations in refereed journals in the previous year per full time equivalent faculty members. In addition, its performance in this field is almost close to the external b

Department of Mathematics should encourage and support its members to increase number of publications in good reputation journals.

Although this ratio shows lacking number of citation in refereed publications, Department of Mathematics makes efforts to enhance this ratio and raise faculty members awareness of importance if this issue by doing several workshops about citation such as google scholar citation.

10.3 Commercialization of Research (***)

We extend my efforts in Commercialization of Research from MU By :

MU established King Salman Institute for Studies & Advisory Services which is considered the main representative for management of research, studies, advisory services, scientific research and training provided by MU to foreign sectors (governmental and private) in financial or moral return. The Institute is working on coordination and integration among the university sectors to perform its tasks, and make full use of the university research and service potential (H10.3-1).

The institute works on building strategic partnerships with public and private sectors based on the scientific and technical potential of MU to contribute dynamically in the construction of society and its development through health fields, educational fields, technical fields, and administrative fields (H10.3-2).

In spite of the fact that King Salman Institute for Studies & Advisory Services was established few years ago, it has performed and supervised several projects such as (H10.3-2):

2. Studies and consultation Committee for the Promotion of Virtue and the Prevention of Vice.
3. Projects and contracts related to Saudi Electronic University (SEU):
   - To operate the academic, financial and administrative systems.
   - To prepare and complete the buildings equipment of SEU branches.
   - To build, renovate, and prepare classrooms.
   - Infrastructure of SEU branches,
1. Experience houses offices.
2. Training of the employees of the public security.

10.4 Research Facilities and Equipment (***)
Basic research of Department of Mathematics is conducted in the facilities of the different colleges In addition; the main library and the Deanship of IT provide researchers with scientific journals, proceedings, books, software, and other needed resources. All equipment’s, software, and labs are regularly maintained through Maintenance and Operation Department, research project contract between the faculty member and agencies that support the project.
Points of strength:

1. A research strategic plan, research priorities, and ethics charter for research, publication, and translation are identified.
2. Importance of research in the process of faculty promotion and evaluation.
3. Assigning of distinguish awards to enhance excellence in research and encourage faculty members to increase publications in indexed journals.
4. Releasing of funding programs to encourage students to collaborate in research.

Points need to improve:

1. The research supporting infrastructure needs more improvement including space and equipment for research centers.
2. Encourage faculty members to increase their productions.
3. Working on establishing connections with international research centers and collaborators.

Standard 11. Relationships with the Community (Overall Rating ***)

Significant and appropriate contributions must be made to the community based on the knowledge and experience of staff and the needs of the community for that expertise. Community contributions should include both activities initiated, and it should be carried out by individuals arranged by the institution or by program administrators. Activities should be documented. Staff also should contribute appropriately within the institution.

1-Explanatory note about community activities carried out in connection with the program.

The Mission of the Department of Mathematics emphasizes its role in community service as it is one of its three main goals beside teaching and research. The Department serves the community through different channels: the department, and the individual, and Mathematics Department members.

The community services provided by the program include participating and organizing a number of conferences, workshops, providing consultancies services for public and private
sector and courses. Faculty members of the Department of Mathematics serve as part-time consultants in ministries, public and private organizations.

Report on subsections of the standard:
1- Reviewed the College and University strategic plan.
2- Reviewed the College annual report for 1433/1434H.
3- Reviewed the advisory board document.

11.1 Policies on Community Relationships

Community services are part of the main criteria for promotion in MU. Main community service contributions have to be clearly mentioned in the promotion. Accordingly, each staff is considered as an integral part in promotion. In addition, each year, each faculty staff fills out an academic activity which includes all the academic, scientific, community services and activities of the staff in the last year. Furthermore, the mission of the Department of mathematics emphasized the importance of community services as a means of strengthens the relationship between the program and the outsider community through education, research and other services.

Identification of policies on community relations

Where:
1.56% of the faculty members must identify the services provided by the program, and it should be defined in a way that reflects the skills and abilities of teaching staff in the program, within which the institution operates.

2.55% agree that teaching staff contributions to the community should be reported annually.

3. 56% agree that community contributions should be included in promotion criteria and staff assessments.

4. 51% agree that program initiatives in working with the community should be coordinated with responsible units in the institution to avoid duplication and possible confusion.

Figure 62: Members to assess the level of performance

11.2 Interactions with the Community

Outreach and cooperation with the community is integral part of Mathematics Department's in public service. Community service is articulated in the statement mission of the program as a commitment to work "closely and collaboratively with other organizations at programmatic and individual levels to develop common goals. The objective of the community service at Department of mathematics is to enhance and expand opportunities for its students, and it becomes in community service activities. It also emphasizes the role of the program in the community, and in cultural and educational activities.

Consultation form is an important component of Department of Mathematics service contribution to the community. Faculty members are actively engaged in community enhancement and meaningful efforts; for example, service on local boards, presentations and programs sponsored by the department for Public Service. Activities also include lectures and
presentations. Students often join university professionals in these activities, they give the school students a chance to apply the skills and knowledge they have acquired and to develop contacts that may result in future careers.

The Department of mathematics Advisory Board has been an instrument in developing community relations. The Board composed of citizens from the regional community. Although, the Advisory Board is newly established, the aim is to serve as a channel for the exchanges of ideas and information between the Department and the public and private sector that employs or needs the services at Department of mathematics. They are also helpful in expanding internship opportunities in specific trends and changes from the world outside the Department. The advisory board helps in reviewing the program and makes recommendations for modifications and improvements. This will keep the Department informed about the quality of its programs and allows the program itself to measure its needs.

A number of the Department of Mathematics faculty members hold leading positions in various public organizations:

![Identification of interaction with the community](chart.png)

Where:

1- The figure shows that 48% of faculty members agreed that the faculty is encouraged to participate in seminars that discuss community issues.
2- That 44% of faculty members has agreed to be a relationship between the program, the local industrial sector and employers in professional programs. Relationships should be established with local industries and employers to assist program.

3- That 47% of faculty members has agreed to invite local employers and members of professions associated with the program to join appropriate advisory committees considering programs and other institutional activities.

4- 54% of faculty members call for direct contact between school in the region and department. The faculty can offer assistance and support in areas of specialization, providing information about programs, activities, career opportunities, and arranging enrichment activities for the schools.

5- 55% of faculty members call for direct contact with alumni, keeping them informed about program developments, inviting them to participate in activities, and encouraging financial and other support for new initiatives.

6- 27% of faculty members agreed that we can ask for funding support from individuals and organizations in the community for research and other developments.

7- 55% of the members agreed that records should be kept about community service that is established by individuals, centers or other organizations within the department. These records should be kept in a central database in the institution.

---

**Figure 63: Members to assess the level of performance**
Table 51: Proportion of Full time faculty members actively engaged in community service activities.

<table>
<thead>
<tr>
<th>Mathematics Department</th>
<th>Number of Mathematics members engaged in community service activities</th>
<th>Number of Department staff</th>
<th>Proportion of Department staff engaged to community service activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbers of staff</td>
<td>Three in 1434H</td>
<td>Nine in 1435H</td>
<td></td>
</tr>
</tbody>
</table>

In general, the Mathematics program serves the community through different channels including:

1-The Department organized with cooperation with Saudi Association for Mathematical Sciences an internal conference on “teaching mathematics in general educational stages”.

Teaching all the mathematics courses required by other departments in the college (like Statistics, operations Research and Physics)

1. Evaluation of the extent and quality of community activities associated with the program and of staff teaching in it.

Strengths

- Part of promotion decisions at Department of Mathematics are based on evaluations of faculty contributions to teaching, research, and community service.
- The Department of Mathematics presently offers educational services to the surrounding community and region. And we expect marked growth in the near future.

Areas for improvement

1- There is no plan for all community activities at the Department of Mathematics
2- The Mathematics Program should improve communication between the Program and its surrounding community.
3- Mathematics Program should develop appropriate assessment instruments to demonstrate and enhance the effectiveness of the program's community outreach efforts.
4- The Mathematics Program should provide educational and innovative programming for its community.
5- More of the Department's alumni are needed.

Priorities of action
1. Finalize the community needs assessment plan.
2. Put an effective alumni program

I. Review of Courses

Describe processes followed in reviewing courses. (Ex. Surveys of graduates, faculty, or members of the profession, analysis of student course evaluations, review of course and program reports, interviews with faculty, comparison with similar programs elsewhere, consultancy advice, etc.)

1. Describe processes followed in reviewing courses.

All courses have course specification formulated in NCAA template. Course specification document includes: general information about the course, the course content, general and specific objectives, methods of teaching and assessment, learning resources, facilities requires and finally evaluation and improvement processes. These documents are written by the course coordinator after consultation between all faculties participating in the course. The course coordinators are trained by Dean of development and quality unit. The course specifications are posted on the website to be available for the students and distributed to all people involved in teaching the course.

At the end of the course student surveys (overall course satisfaction and specific faculty evaluations) are carried out by the students. Policies and procedures for students' evaluation for the courses and staff members were developed. The response is voluntary. All results are analyzed by the Department (Assessment and Accreditation Committee). Results of students' evaluations of faculty are presented in the annual program report.

At the end of the course, the course coordinators prepares the course report that has: general information about the course, the course delivery, effectiveness of planned teaching strategies for intended learning outcomes, students' result, any difficulties in resources availability or administration issues, course evaluation and finally planning for improvement of the course. Each course organizer has been trained to fill out this report. All course reports are received and analyzed by the Assessment and Accreditation Committee. A copy also goes to the student’s Academic Study Plans committee and the Vice Dean for Academic Affairs.

The course reports are discussed in the council of the department meeting, and comments sent to the Assessment and Accreditation Committee for any changes or improvements in the course based on the course report. Any major changes in the course must be reflected in the course specifications again.
Course Evaluations

Table 52: Summary of overall students’ satisfaction rate in all courses

<table>
<thead>
<tr>
<th>Year/ Courses</th>
<th>Mark/5</th>
<th>NCAAA stars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1 Courses</td>
<td>Not applicable (PYP)</td>
<td></td>
</tr>
<tr>
<td>Year 2 Courses</td>
<td>4.04</td>
<td>4</td>
</tr>
<tr>
<td>Year 3 Courses</td>
<td>4.6</td>
<td>4</td>
</tr>
<tr>
<td>Year 4 Courses</td>
<td>4.7</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 53: Summary of overall students’ satisfaction rate in a sample of courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
<th>Overall Rating/5</th>
<th>N=</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math 482</td>
<td>80%</td>
<td>10%</td>
<td>0</td>
<td>0</td>
<td>10%</td>
<td>4.5</td>
<td>9</td>
</tr>
<tr>
<td>Math 326</td>
<td>90%</td>
<td>0</td>
<td>10%</td>
<td>0</td>
<td>0</td>
<td>4.8</td>
<td>13</td>
</tr>
<tr>
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<td>70%</td>
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<td>0</td>
<td>10%</td>
<td>10%</td>
<td>4.2</td>
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<tr>
<td>Math 210</td>
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<td>0</td>
<td>0</td>
<td>10%</td>
<td>4.1</td>
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<tr>
<td>Math 343</td>
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<td>0</td>
<td>10%</td>
<td>4.3</td>
<td>7</td>
</tr>
<tr>
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<td>40%</td>
<td>10%</td>
<td>0</td>
<td>0</td>
<td>4.4</td>
<td>7</td>
</tr>
<tr>
<td>Sta 438-z</td>
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<td>0</td>
<td>0</td>
<td>4.8</td>
<td>6</td>
</tr>
<tr>
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<td>20%</td>
<td>10%</td>
<td>0</td>
<td>30%</td>
<td>3.4</td>
<td>10</td>
</tr>
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<td>20%</td>
<td>10%</td>
<td>0</td>
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<td>3.8</td>
<td>19</td>
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<td>0</td>
<td>10%</td>
<td>0</td>
<td>4.6</td>
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<tr>
<td>Math 204</td>
<td>60%</td>
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<td>0</td>
<td>10%</td>
<td>0</td>
<td>3.9</td>
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</tr>
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<td>10%</td>
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<td>0</td>
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<td>0</td>
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<td>10%</td>
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<tr>
<td>Math 353</td>
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<td>30%</td>
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<td>10%</td>
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<td>0</td>
<td>10%</td>
<td>4.5</td>
<td>24</td>
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<td>90%</td>
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<td>10%</td>
<td>0</td>
<td>0</td>
<td>4.8</td>
<td>13</td>
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</table>
Figure 64: Shows students overall rating on the quality of their courses.

Table 54: Comparison between MU and KSU in ‘satisfaction rate in all courses Summary’

<table>
<thead>
<tr>
<th>Years</th>
<th>Majmaah University (MU)</th>
<th>King Saud University(KSU)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Mark/ 5</td>
<td>NCAAA stars</td>
</tr>
<tr>
<td>Year 1 Courses</td>
<td>Not Applicable(PYP)</td>
<td>Not Applicable (PYP)</td>
</tr>
<tr>
<td>Year 2 Courses</td>
<td>4.04</td>
<td>4</td>
</tr>
<tr>
<td>Year 3 Courses</td>
<td>4.6</td>
<td>4</td>
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<tr>
<td>Year 4 Courses</td>
<td>4.7</td>
<td>4</td>
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</table>

Comparison between MU and KSU in summary of overall students’ satisfaction rate in all courses Summary

3. Statistical results by department of the second semester 35/36

Table 55: Statistical results by department of the second semester 35/36

<table>
<thead>
<tr>
<th>Course code</th>
<th>Enrolled</th>
<th>Examined</th>
<th>Passed</th>
<th>Passing rate</th>
<th>A+</th>
<th>A</th>
<th>B+</th>
<th>B</th>
<th>C+</th>
<th>C</th>
<th>D+</th>
<th>D</th>
<th>F</th>
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</thead>
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<td>7</td>
<td>64%</td>
<td>3</td>
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<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>4</td>
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<td>43</td>
<td>33</td>
<td>27</td>
<td>82%</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>3</td>
<td>10</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Course code</td>
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<td>Examined</td>
<td>Passed</td>
<td>Passing rate</td>
<td>A+</td>
<td>A</td>
<td>B+</td>
<td>B</td>
<td>C+</td>
<td>C</td>
<td>D+</td>
<td>D</td>
<td>F</td>
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<td>MAT 101-Z</td>
<td>5</td>
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<td>0</td>
<td>0</td>
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<td>0</td>
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<td>0</td>
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</tr>
<tr>
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<td>2</td>
<td>2</td>
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<td>0</td>
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<td>0</td>
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<td>0</td>
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<td>0</td>
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<tr>
<td>MAT 353-Z</td>
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<td>2</td>
<td>67%</td>
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<td>5</td>
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<td>MAT 382-Z</td>
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