



جامعة المجمعة
Majmaah University

Program Specifications (PS)

Institution:	Majmaah University
Academic Department :	Chemistry Department- College of Education- Zulfi
Programme :	Chemistry
Specification Approved Date : / / H

Muharram 1437 H



Program Specifications

1. Institution: **Majmaah University** Date: \ \ H

2. College / Department : **Chemistry Department, College of Education -Zulfi**

3. Dean / Department Head **Dr. Gehan Abd ElAziz Elaemary**

4. Insert program administrative flowchart :

5. List all branches/locations offering this program

Chemistry

Branch/Location 1.

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Branch/Location 2.

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Branch/Location 3.

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Branch/Location 4.

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A. Program Identification General Information

1. Program title :	Chemistry	Code :	CHEM
2. Total credit hours needed for completion of the program :	144 hours		
3. Award granted on completion of the program :	B. of Education, Chemistry(B.Ed)		
4. Major tracks/pathways or specializations within the program :	Chemistry		
5. Intermediate Exit Points and Awards (if any) :	N.A		
6. Professional occupations (licensed occupations, if any) for which graduates are prepared. (If there is an early exit point from the program) include professions or occupations at each exit point) from the program (eg. diploma or associate degree) include professions or occupations at each exit point) :	<ul style="list-style-type: none"> - Working in all schools stages (pre-college stage) - Higher Education - Research Centers - Analysis Labs - Hospitals - Water plants 		
7. (a) New Program	<input type="checkbox"/>	Planned starting date :	
(b) Continuing Program	<input checked="" type="checkbox"/>	Year of most recent major program review 1434 H	
Organization involved in recent major review			
Accreditation review by :			
Other :			
8. Name of program chair or coordinator.			
(If a program chair or coordinator has been appointed for the female section as well as the male section, include names of both)			
N.A			
9. Date of approval by the authorized body :			

(MoHE for private institutions and Council of Higher Education for public institutions).

Campus Branch/Location	Approval By	Date
Main Campus:		
1: Majmaah University	13/11/1435
2:	
3:	
4:	

B. Program Context :

1. Explain why the program was established.

a. Summarize economic reasons, social or cultural reasons, technological developments, national policy developments or other reasons.

Providing the market with specialists in chemistry and community services

- Graduating a female citizen enables to scope the program field changes
- Providing labour chances to luxurious life
- Turning out to higher education as according to the statistics of ministry of Planning, the rate of turning out is increasing 13.6% annually.

b. Expl b. Explain the relevance of the program to the mission and goals of the institution.

Scientific excellence through plans and programs enables students to acquire the knowledge and skills needed to compete in the labor market.

2. Relationship (if any) to other programs offered by the institution / college / department .

a. Does this program offer courses that students in other programs are required to take?

Yes	yes
NO	

If yes, what has been done to make sure those courses in other departments meet the needs of students in this program?

- Courses specification
 - Coordinate with those program
 - Design questionnaires for female students
-

b. Does the program require students to take courses taught by other departments?

Yes yes
NO

If yes, what has been done to make sure those courses in other departments meet the needs of students in this program?

Courses specification

-Coordinate with those Department

-Design questionnaires for female students

.....

.....

3. Do students who are likely to be enrolled in the program have any special needs or characteristics? (eg. Part time evening students, physical and academic disabilities, limited IT or language skills).

Yes yes

NO

4. What modifications or services are you providing for special needs applicants?

Does not exist.

C. Mission, Goals and Objectives

1 . Program Mission Statement :

The Chemistry Department seeks to give an advanced education that combines between knowledge and innovation in the field of chemistry to prepare a new generation of qualified graduates to match with work place demands according to quality standards.

List major objectives of the program within to help achieve the mission. For each measurable objective describe the measurable performance indicators to be followed and list the major strategies taken to achieve the objectives.

Measurable Objectives	Measurable Performance Indicators	Major Strategies
1. Achieving Academic excellence in accordance with quality standards.	1- Students' grades. 2- Number of students as per instructor. 3- Feedback on their professional performance.	1-A distinguished teaching. 2 - Adopting the latest teaching methods
2. Prepare national competences in the field of chemistry who	1 - percentage of students enrolled to the program who	1-Varying the methods of evaluation.

<p>contribute to the making of society, development programs insofar as education, health, industry and scientific research are concerned.</p>	<p>have successfully completed the first year 2-percentage of students enrolled to the program who have successfully completed the minimum period. 3-percentage of students enrolled to the program who have successfully completed the minimum period.</p>	<p>2 - Extra-curricular activities</p>
<p>3. To participate in the advancement of knowledge through seminars, workshops and publications.</p>	<p>1-Relationship between the research fields and the priorities set in the program. 2 - Number of published papers in peer-reviewed journals 3- Percentage of teaching staff who have conducted research in the field.</p>	<p>1-Encouraging scientific research. 2 - Encouraging students to participate in conferences 3- Organizing seminars and workshop</p>
<p>4. Serving state and private sectors by increasing people's awareness of chemistry and exchange programs.</p>	<p>1-Feedback from society about the quality of the program. 2- Offering services set by society 3-The services offered to society on the basis of what this latter needs</p>	<p>1-Organizing seminars and workshops for society. 2-Organizing conferences for some sectors of society..</p>

D. Program Structure and Organization

1. Program Description:

List the core and elective program courses offered each semester from Prep Year to graduation using the below Curriculum Study Plan Table

(A separate table is required for each branch IF a given branch/location offers a different study plan).

Curriculum Study Plan Table

* *Prerequisite* – list course code numbers that are required prior to taking this course.

Year	Course Code	Course Title	Required or Elective	* Pre-Requisite Courses	Credit Hours	College or Department
Prep Year						
1st Year Semester 1	Course Code	Course Title	Required or Elective	* Pre-Requisite Courses	Credit Hours	College or Department
	CHEM111	general chemistry (1)			2	
	EDU 116	Teaching techniques and Communication skills			2	
	EDU 117	Fundamentals of Islamic Education			2	
	EDU 118	The System and Policy of Education in KSA			2	
	MATH 111	Calculus(1)			2	

Year	Course Code	Course Title	Required or Elective	* Pre-Requisite Courses	Credit Hours	College or Department
	PHYS 111	General physics (1)			2	
		University requirement			2	
		University requirement			2	
		University requirement			2	
1st Year Semester 2						
	CHEM121	Organic chemistry (1)			4	
	CHEM122	Inorganic chemistry (main group elements)			2	
	COMP125	Introduction to computer			3	
	EDU 126	Developmental Psychology			2	
	MATH123	Introduction to differential equations		MATH 111	3	
	STAT 101	Biostatistics			2	
		University requirement			2	

Year	Course Code	Course Title	Required or Elective	* Pre-Requisite Courses	Credit Hours	College or Department
2nd Year Semester 1						
	CHEM211	Organic chemistry 2		CHEM121	4	
	CHEM212	Physical chemistry- Phase Rule			2	
	CHEM213	General chemistry 2		CHEM111	3	
	EDU 216	Psychological Health		EDU 126	2	
	EDU 217	Educational Psychology			2	
	PHYS 123	General physics 2		PHYS 111	3	
		University requirement			2	
2nd Year Semester 2						
	CHEM221	Heterocyclic Compounds chemistry		CHEM211	4	
	CHEM222	Quantum Chemistry (1)		MATH 123	2	
	CHEM223	Physical organic chemistry		CHEM .211	2	

Year	Course Code	Course Title	Required or Elective	* Pre-Requisite Courses	Credit Hours	College or Department
	CHEM224	Descriptive Analytical Chemistry			3	
	CHEM225	Electro-Reversible Chemistry 1			3	
	EDU 226	Educational Psychology		EDU 126	2	
		University requirement			2	
3rd Year Semester 1						
	CHEM311	Quantum Chemistry (2)		CHEM 222	2	
	CHEM312	Thermodynamic chemistry			3	
	CHEM314	organic chemistry (polymers and patrol)		CHEM 211	3	
	CHEM315	Quantitative Analytical Chemistry		CHEM224	3	
	CHEM316	Physical Chemistry (Surfaces, Colloids & Catalysis)			3	
	EDU316	Administration and Educational Planning			2	

Year	Course Code	Course Title	Required or Elective	* Pre-Requisite Courses	Credit Hours	College or Department
	EDU317	Production of E-learning			2	
3rd Year Semester 2						
	CHEM321	Biochemistry 1			3	
	CHEM322	inorganic chemistry(transition elements)			4	CHEM 122
	CHEM323	Electro-Reversible Chemistry 2			4	CHEM 225
	CHEM324	Coordination chemistry			3	CHEM 122
	EDU 326	Teaching Strategies			2	
	EDU 327	Teaching Strategies			2	
4th Year Semester 1						
	CHEM411	Instrumental Analysis Chemistry			4	
	CHEM412	Kinetic Chemistry		CHEM 312	3	
	CHEM413	Dyes chemistry		CHEM 221	4	
	CHEM414	Biochemistry 2		CHEM 321	3	

Year	Course Code	Course Title	Required or Elective	* Pre-Requisite Courses	Credit Hours	College or Department
	EDU 416	Modern Trends in Teaching Strategies		EDU 326	2	
	EDU 417	Educational Evaluation			2	
4th Year Semester 2						
	CHEM421	Natural Products Chemistry		CHEM221	3	
	CHEM 422	Chemistry of organic reactions mechanisms		CHEM211	2	
	EDU426	Field education		EDU 326.416	6	
	CHEM423	organic chemistry (Organic Compounds Spectra)		CHEM411	4	
	CHEM 424	Nuclear and Radiation Chemistry			4	
<i>Include additional years if needed.</i>						

2. Required Field Experience Component

(if any, e.g. internship, cooperative program, work experience).

Summary of practical, clinical or internship component required in the program.

Note: see Field Experience Specification

a. Brief description of field experience activity

Practicum foundations:

Practicum based on a set of the foundations that comes from its integration and interaction the future teacher who has an excellent teacher's skills and ingredients

b. At what stage or stages in the program does the field experience occur?

(eg. year, semester)

4th year / semester eight

c. Time allocation and scheduling arrangement.

(eg. 3 days per week for 4 weeks, full time for one semester)

2 days per week, full time for one semester

d. Number of credit hours (if any)

6 Hours

3. Project or Research Requirements (if any)

Summary of any project or thesis requirements in the program.

(Other than projects or assignments within individual courses)

(A copy of the requirements for the project should be attached.)

N.A

a. Brief description

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b. List the major intended learning outcomes of the project or research task.

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c. At what stage or stages in the program is the project or research undertaken?

(e.g. year, semester)

.....

d. Number of credit hours (if any)

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e. Description of academic advising and support mechanisms for students.



f. Description of assessment procedures

(including mechanism for verification of standards)

4. Learning Outcomes in Domains of Learning, Assessment Methods and Teaching Strategy

	NQF Learning Domains and Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	Knowledge		
1.1	Recognize the knowledge of fundamental concepts in Chemistry	1- Lectures 2-presentation 3- Practical sessions	Regular participation at lecture and lab. Assignment: Home-Work Seminar: Med.t-semester Exam.: Final lab exam Final theoretical exam
1.2	Covering the major principles and theories in the field of chemistry		
1.3	Introducing students to the prominent teaching methods and approaches in relation to chemistry.		
1.4			
2.0	Cognitive Skills		
2.1	Explain to general audience the Chemistry principles that underlie our understanding of nature	1- Lectures 2-presentation 3- Practical sessions	Regular participation at lecture and lab. Assignment: Home-Work Seminar: Med.t-semester Exam.: Final lab exam Final theoretical exam
2.2	Develop the skill for analyzing/solving the Chemistry based problems.		
2.3	Think creatively about scientific problems and their solutions		
2.4	Applying the acquired academic skills to professional and academic contexts.		
3.0	Interpersonal Skills & Responsibility		
3.1	An ability to work effectively in diverse teams in both classroom and laboratory.	Student-directed learning:	Through observation in practical and presentations.
3.2	Taking the initiative to identify urgent problems and solve them.		

	NQF Learning Domains and Learning Outcomes	Teaching Strategies	Assessment Methods
3.3	Assuming responsibility for self-learning and professional development.	Small groups of students are given individual assignments. Students will introduce their assignment in the form of: Power point presentation. Written assignment. 2- collaborative education	
3.4	Showing high commitment to work ethics in accordance with Islamic values		
4.0	Communication, Information Technology, Numerical		
4.1	Think creatively about scientific problems and their solution, both orally and in written	-Small group teaching. 2- Practical sessions. 3-Power point presentation. 4-Written assignment.	1-Small group teaching. 2- Practical sessions. 3-Power point presentation. 4-Written assignment.
4.2	Locate and retrieve scientific information, using modern computer tools		
4.3	Learn how to collect and classify the required topics using internet communication tools.		
5.0	Psychomotor		
5.1	N.A		
5.2			



Program Learning Outcome Mapping Matrix

Identify on the table below the courses that are required to teach the program learning outcomes. Insert the program learning outcomes, according to the level of instruction, from the above table below and indicate the courses and levels that are required to teach each one; use your program's course numbers across the top and the following level scale.

Levels : I = Introduction(Introduce) R = Reinforce (Proficient) E = Emphasize (Advanced)

		Program Learning Outcome														
		NQF Learning Domains and Learning Outcomes														
		Knowledge			Cognitive Skills			Interpersonal Skills & Responsibility			Communication, Information Technology, Numerical			Psychomotor		
		1.1	1.2	1.3	2.1	2.2	2.3	3.1	3.2	3.3	4.1	4.2	4.3	5.1	5.2	5.3
COURSES	A-100															
	A-101															
	A-102															
	A-103															
	A-104															
	A-105															
	A-106															
	A-107															
	A-108															
	A-109															
	A-110															

Faculty: Az Zulf College of Education

Department: Chemistry

Program: Chemistry

Course	A NCAAA				B NCAAA						C NCAAA					D NCAAA		
	A1	A2	A3	A4	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	C5	D1	D2	D3
	CHEM111	I	I	I		I	I								I	I	I	
EDU 116			I			I		I				I	I	I		I	I	
EDU 117			I			I		I										
EDU 118			I			I		I				I	I	I		I	I	
MATH 111	I				I							I.....		I			I	
PHYS 111	I				I			I				I						
CHEM121 121	I	I			I	I						I		I	I			
CHEM122 122	I	I			I	I		I						I				
COMPI25 125	I	I	I		I	I									I			
EDU 126			I			I		I				I	I	I				
MATH123 123																		
STAT 101																		
CHEM211 211	R	R			R	R		R	R			R	R	R				
CHEM212212212212	R	R			R	R		R				R		R	RR			
CHEM213213213	R	R			R	R		R	R			R	R	R	R			

I: Introduce
Emphasize.

R: Reinforce

E:



Course	A _{NCAAA}				B _{NCAAA}						D _{NCAAA}			E _{NCAAA}					
	A1	A2	A3	A4	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	C5	D1	D2	D3	
	EDU 216			R			R		R				R	I	R		R	R	
EDU 217			R			R		R				R	I	R		R	R		
PHYS 123	R				R			R				R							
CHEM221	E	E			E	E		E	E			E	E	E	I	E	E	E	
CHEM222	I	I	I		I	I		I	I					R	R	R	R	R	
CHEM223	E	E			E	E		E	E			R		E	I	E	E	E	
CHEM224	I	I	I		I	I		I	I			R	R	R	R	R	R	R	
CHEM225	R	R	R		R	R		R	R			R		R	R	R	R	R	
EDU 226			R			R		R					R	R		R	R		
CHEM311	R	R	R		R	R		R	R			R		R	R	R	R	R	
CHEM312	R	R	R		R	R		R	R			E	R	R		R	R	R	
CHEM314	E	E			E	E		E	E			R	E	E	I	E	E		
CHEM315	R	R	R		R	RE		R	R			R	R	R	R	R	R	R	
CHEM316	R	R	R		R	R		R	R			R	R	R	R	R	R	R	
EDU316			R			R		R				R	R	R	I	R	R		



Course	A _{NCAAA}				B _{NCAAA}						D _{NCAAA}			E _{NCAAA}				
	A1	A2	A3	A4	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	C5	D1	D2	D3
	EDU317			R			R		R				R	R	R	I	R	R
CHEM321	R	R			R	R		R	R			R	E	R	I	R	R	
CHEM322	R	R			R	R		R						R	R	R	R	
CHEM323	E	E	E		R	R		R	R			E	R	E	R	E	E	
CHEM324	R	R			R	R		R	I			I	I	R	I	E	E	
EDU 326			I			I		I	I			I	I	I		I	I	
EDU 327			R			R		R				R	R	R		R	R	
CHEM411 411	E	E	E		E	E		E	E			E	R	R	R	E	E	
CHEM411 412	E	E	E		E	E		E	E			E	R	R	R	E	E	
CHEM411 413	E	E			E	E		E	E			I	E	E	E	E	E	
CHEM411 414	E	E			E	E		E	E			I	E	E	E	E	E	
EDU 416			R			R		R				R	R	R		R	R	
EDU 417			E			E		E				E	E	E		E	E	
CHEM421 421	E	E			E	E		E	E			E	E	E	I	E	E	
CHEM422	E	E			ER	E		E	E			E		E	I	E	E	
EDU426			E			R		R				E	E	E		E	E	
CHEM423	E	E			E	E		E	E			E	E	E	I	E	E	
CHEM421 424	R	R			R	R		R	R			R		R	R	R	R	

I: Introduce

R: Reinforce

E: Emphas

5. Admission Requirements for the program

Attach handbook or bulletin description of admission requirements including any course or experience prerequisites.

Attach handbook or bulletin description of admission requirements including any course or experience prerequisites.

6. Attendance and Completion Requirements

Attach handbook or bulletin description of requirements for:

- a. Attendance.
- b. Progression from year to year.
- c. Program completion or graduation requirements.

Attach handbook or bulletin description of requirements for:

- a.Attendance.
- b.Progression from year to year.
- c.Program completion

E. Regulations for Student Assessment and Verification of Standards

What processes will be used for verifying standards of achievement :

(eg check marking of sample of tests or assignments? Independent assessment by faculty from another institution) (Processes may vary for different courses or domains of learning.)

Unified exams, group marking and group grading for multisection courses.

Internal assessment at the end of semester.

F Student Administration and Support

1. Student Academic Counselling

Describe the arrangements for academic counselling and advising for students, including both scheduling of faculty office hours and advising on program planning, subject selection and career planning (which might be available at college level).

Meeting new students.

- Provide counseling to the students.
- A weekly office schedule is displayed on each faculty member's office and a total of 10 hours are specified for the students to provide them extra assistance and help in solving their academic problems.

- A follow-up committee exist in the department to look after the needs of the teaching assistant's scholarship holders and the meritorious students.
- Displaying the department handbook on the website of the department

2. Student Appeals :

Attach the regulations for student appeals on academic matters, including processes for consideration of those appeals.

Ministry of higher education regulations,
University regulations of student's rights unit.
(<http://mu.edu.sa/en/deanships/deanship-admission-andregistration>)

G. Learning Resources, Facilities and Equipment

1a. What processes are followed by faculty and teaching staff for planning and acquisition of textbooks, reference and other resource material including electronic and web based resources?

Texts and references are chosen by specialized committees in the department and finally approved in the departmental meeting.

- These texts and references are made available in an appropriate time by the book shop and the central library.
- Through writing original text books or translation of some standard books by the faculty members.
- Subscribing in the data bases to serve the research purposes.

1b. What processes are followed by faculty and teaching staff for planning and acquisition resources for library, laboratories, and classrooms.

1. Using the public library of the University.
2. Adopting the references and text books approved by the council of the physics department or any authorized committee.
3. Participating in the University's database that allows the access to most international publishers.
4. Writing books and translation by the department members.
5. Purchasing and providing the necessary books.

2. What processes are followed by faculty and teaching staff for evaluating the adequacy of textbooks, reference and other resource provisions?

Reviewing the contents of these texts and references by the specialized committees in the department.

- Chairman follows up.

- Authored and translated texts are sent to referees

3. What processes are followed by students for evaluating the adequacy of textbooks, reference and other resource provisions?

Students have the opportunity to evaluate textbooks within student course experience survey as well as annual student focus group. Both activities are run by the college-level Academic Assessment Unit.

4. What processes are followed for textbook acquisition and approval?

Textbooks are made available to students through the University Bookstore. Departments submit

their revised textbook lists at the end of the academic year before summer to be made available by beginning of following year.

H. Faculty and other Teaching Staff

1. Appointments

Summarize the process of employment of new faculty and teaching staff to ensure that they are appropriately qualified and experienced for their teaching responsibilities.

- Generally, meritorious graduates are employed as teaching assistants in the department, then they are provided with scholarships for MS and Ph.D. program.

After the completion of the Ph.D. degree they are appointed as faculty members.

- Jobs for the academic staff are advertised nationally and internationally through all kinds of media (like internet , news papers and magazines), a committee appointed by the department examine the applications and classifies them, those to be considered for a position and those who do not meet the academic standards of the department.

2. Participation in Program Planning, Monitoring and Review

a. Explain the process for consultation with and involvement of teaching staff in monitoring program quality, annual review and planning for improvement.

- Participation of faculty members in various academic committees,
- Any recommendations by these committees are discussed in the departmental council

b. Explain the process of the Advisory Committee (if applicable)

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3. Professional; Development

What arrangements are made for professional development of faculty and teaching staff for:

- a. Improvement of skills in teaching and student assessment?
 - a. Workshops conducted by the deanship of development and quality assurance
 - b. Seminar lectures and colloquium.
 - b. Other professional development including knowledge of research and developments in their field of teaching specialty?
- Sabbatical leaves
- Conducting Seminar lectures and colloquium.
- Attending national and international scientific conferences.
- Distinguished professors in various topics are invited to visit the department.

4. Preparation of New Faculty and Teaching Staff

Describe the process used for orientation and induction of new, visiting or part time teaching staff to ensure full understanding of the program and the role of the course(s) they teach as components within it.

- Awareness workshop is conducted at the beginning of every academic year for new faculty members.
- Introduce the department's programme and described its courses.
- Introduce the internal regulations of the university and the higher education.
- Department handbook.
- Periodical meetings with heads of academic committees and course coordinators.
- Workshops conducted by the deanship of development and quality assurance

5. Part Time and Visiting Faculty and Teaching Staff

Provide a summary of Program/Department/College/institution policy on appointment of part time and visiting teaching staff.

(ie. Approvals required, selection process, proportion to total teaching staff, etc.)

Does not exist.

I. Program Evaluation and Improvement Processes

1. Effectiveness of Teaching

a. What processes are used to evaluate and improve the strategies for developing learning outcomes in the different domains of learning?

(eg. assessment of learning achieved, advice on consistency with learning theory for different types of learning, assessment of understanding and skill of teaching staff in using different strategies)

1. Survey's to evaluate the different courses.
2. Survey's to evaluate the faculty member by the student.
3. Internal workshops in the department.

b. What processes are used for evaluating the skills of faculty and teaching staff in using the planned strategies?

1. Survey's to evaluate the faculty member by the student.
2. Self-evaluation by the head of department and the dean of the college.

2. Overall Program Evaluation

a. What strategies are used in the program for obtaining assessments of the overall quality of the program and achievement of its intended learning outcomes

(i) From current students and graduates of the program?

- Polls for the enrolled students and those who graduated from the program
- Alumni surveys
- Establishing an internet open forum to get student feedback

(ii) From independent advisors and/or evaluator(s)?

Asking for external evaluation from external referees.

(iii) From employers and/or other stakeholders.

Polls for the employers to know suitability of these graduates to the job, and how good their scientific knowledge is.

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Attachments :

1. Copies of regulations and other documents referred to in template preceded by a table of contents.

2. *Course specifications for all courses including field experience specification if applicable.*

Authorized Signatures

<i>Dean /Chair</i>	<i>Name</i>	<i>Title</i>	<i>Signature</i>	<i>Date</i>
<i>Program Dean or Program Chair Main Campus</i>				
<i>Branch 1</i>				
<i>Branch 2</i>				
<i>Branch 3</i>				
<i>Branch 4</i>				





جامعة المجمعة
Majmaah University

Program Specifications (PS)

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This form compatible with NCAAA Edition

2 (a)