

National Commission for Academic Accreditation & Assessment

Program Specification

For guidance on the completion of this template, please refer to Chapter 2, section 2.2 of Part 2 of this Handbook 2 Internal Quality Assurance Arrangement and to the Guidelines on Using the Template for a Program Specification in Attachment 2 (b).

Institution: Majmaah University
College/Department: Chemistry Department, Az-Zulfi College of Education

A. Program Identification and General Information

1 Program title and code: B.Sc. of Chemistry
2. Total credit hours needed for completion of the program: 188 hours for eight semesters
3. Award granted on completion of the program: B.Sc. of Education, Chemistry
4. Major tracks/pathways or specializations within the program (eg. transportation or structural engineering within a civil engineering program or counselling or school psychology within a psychology program) <p style="text-align: center;">Chemistry</p>
5. Intermediate Exit Points and Awards (if any) (eg. associate degree within a bachelor degree program)
6. Professions or occupations for which students are prepared. (If there is an early exit point from the program (e.g. 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	<input type="text"/>
(b) Continuing Program	<input checked="" type="checkbox"/>	Year of most recent major program review	<input type="text" value="1434"/>
Organization involved in recent major review (e.g. internal within the institution, Accreditation review by _____? Other _____?			
8 Name and position (eg department chair person) of faculty member managing or coordinating the program.			
Dr. Jehan Alomayri Supervisor of Chemistry Department			
9. Location if not on main campus or locations if program is offered in more than one location.			
College of Education – Az- Zulfi- Main Campus			

B Program Context

<p>1 Explain why the program is needed.</p> <p>- Providing preparatory and secondary schools and colleges of Education with specialized teachers in Chemistry (the bad need of market to the program graduates)</p> <p>a. Summarize economic reasons, social or cultural reasons, technological developments, national policy developments or other reasons.</p> <ul style="list-style-type: none"> - 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. <p>b. Explain the relevance of the program to the mission of the institution.</p> <ul style="list-style-type: none"> - The program is considered a small part to achieve the mission and objectives of association. Chemistry program is considered one of these programs presented by Az-Zulfi College of Education and University. Nevertheless, the program vision, mission and objectives are consisted with the college and university vision, mission and objectives in leadership to scope all development of community service.

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 No

If yes, what should be done to make sure those courses meet the needs of students in the other programs?

- **Coordinate with those departments in putting the program vision**
- **Design questionnaires for female students**

b. Does the program require students to take courses taught by other departments? Yes No

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

- **Studying the difficulties and problems that face students who studied these courses and coordinate with program to tackle these difficulties.**
- **design questionnaires for female students**

3. Do the students who are likely to be enrolled in the program have any special needs or characteristics that should be considered in planning the program? (eg. Part time evening students, limited IT or language skills) Yes No

If yes, what are they?

- **Increasing the percentage in secondary school especially in chemistry.**
- **Self – ready is available for joining department.**

4. What should be done in the program to respond to these special characteristics?

- **Free of body handicapped.**
- **Free of allergy, asthma and well pronounced.**

C. Mission and Goals of the Program

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.**

2. List any major changes or strategic new developments planned for the program within the next three to five years to help achieve its mission. For each change or development describe the major strategies to be followed and list the indicators that will be used to measure achievement.

Major Changes or Developments	Strategies	Indicators
Each chemistry specialist should be single-alone	Searching for a location for each specialization, labs and staff members	Increasing numbers of female accepted and classrooms annually
Establishing a post graduate unit	Providing labs and staff members	Female students' Acceptance difficulty in other universities and for other social reasons, female students refuses to travel to Riyadh to complete post graduate studies.
Partnership between the department and the similar departments in Saudi and national universities	Encouraging the competencies to attribute , contract or appoint in program	Increase the program staff members
Establishing a library for department	Providing a location for library and demanding books and references	References are unavailable
Implementing programs that aim at developing staff members and assistants. Developing female administrators	Special training courses and workshops	Increasing the competency of members and female administrators
Preparing a generation able to serve community	.modify the study plan to be English teaching for all courses	Increasing the female students' competency and improve their skills

D. Program Structure and Organization

1 Program Description.

- A program or department manual should be available for students or other stakeholders and a copy of the information relating to this program should be attached to the program specification. (attach 4)
- This information should include required and elective courses, credit hour requirements and department/college and institution requirements, and details of courses to be taken in each year or semester. (Study plan is attached). Attach 5.

2. Development of Special Student Characteristics or Attributes

Strategies and students' activities	Special abilities
Strategy: Prolong the practical courses	The ability to bear
Evidence: weak ability students can't continue to bear	
Strategy: experiments require accurate results and statistics	Accuracy and strength

Evidence: equations	
Strategy: pursuing female students to do experiments by themselves and elicit results	Creativity, discovering and prediction
Evidence: teacher's marking	
Strategy: study plan	Preparing a generation able to follow up the news and developments
Evidence: scope the actual development in modern teaching courses means and interacting with female students via internet	

3. Required Field Experience Component (if any) (Eg. internship, cooperative program, work experience)

<p>Summary of practical, clinical or internship component required in the program. Note that a more detailed Field Experience Specification comparable to a course specification should also be prepared in a separate document for any field experience required as part of the program.</p>
<p>a. Brief description of field experience activity</p> <ul style="list-style-type: none"> - Field experience specification. (attach 6)
<p>b. List the major intended learning outcomes for the program to be developed through the field experience</p> <ul style="list-style-type: none"> - Female students teach at Zulfi schools as a field education under an academic supervision from supervisors, specialists and educationalists. Trained Female students are adhered to practice their tasks. There are some tasks: <ul style="list-style-type: none"> - They are adhered to the chosen school and if changed, inform the supervisor - They are adhered to hand the teaching notebook to the female supervisor. - Attending the watching lessons for school teachers as possible to develop their teaching skills. - Preparing daily teaching plans by supervisor (staff member) and the school teacher. - Preparing aids to achieve teaching aims. - Commitment of the school general rules - Good communication with the staff member and the school teacher. - Sharing the school activities. - Accepting the criticism from internal supervisor or the teacher. - Should be a good model for students inside school.
<ul style="list-style-type: none"> - c. At what stage or stages in the program does the field experience occur? (e.g. year, semester) - - Field Education in governorate schools

<ul style="list-style-type: none"> - Stating the teacher's role inside classroom - Applying teaching methods of science and how to apply them - Benefit from different learning resources inside classroom. - Building a solid base for future female teacher that links between scientific theories and concepts which presented during courses and school environment. - Provide scientific experiences that help female trainee to practice different assigned tasks. - Providing the chance for female teacher to know the school environment with its different aspects. - Providing the chance for female trainees to know the courses especially in the special and how to deal with and develop in the future. - Acquire the female trainees the teaching skills of term and daily planning, implementing daily lessons, using teaching aids and overall lesson assessment. - Acknowledge the facilities and abilities, positive desires development towards the teaching professionalism. - Support and modify positive behaviors in female trainees' performance. - Practicing the miscellaneous and different activities inside or outside classroom with students and apply what she have been taught from notions and concepts. 	
d. Time allocation and scheduling arrangement. (E.g. 3 days per week for 4 weeks, full time for one semester)	
<ul style="list-style-type: none"> - Student should apply 12 hours weekly within twice a week. 	
e. Number of credit hours	12 hours

4. Project or Research Requirements (if any)

<p>Summary of any project or thesis requirement in the program. (Other than projects or assignments within individual courses) (A copy of the requirements for the project should be attached.)</p> <p style="text-align: center;">Inapplicable</p>	
a. Brief description	
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b. List the major intended learning outcomes of the project or research task.	
c. At what stage or stages in the program is the project or research undertaken? (eg. year, semester)	

d. Number of credit hours
e. Summary description of provisions for student academic advising and support.
f. Description of assessment procedures (including mechanism for verification of standards)

5. Development of Learning Outcomes in Domains of Learning

For each of the domains of learning shown below indicate:
<ul style="list-style-type: none"> • The knowledge or skill the program is intended to develop and the level of that knowledge and skill. (as a guide see general descriptions of knowledge and skills in the National Qualifications Framework for the qualification level of this program; • The teaching strategies to be used in courses in the program to develop that knowledge and those skills. (This should be a general description of the approaches taken throughout the program but if particular responsibility is to be assigned to certain courses this should be indicated.); • The methods of student assessment to be used in courses in the program to evaluate learning outcomes in the domain concerned.
<p>a. Knowledge</p> <ul style="list-style-type: none"> - Providing students a comprehensive chemical culture. - Providing students the overall knowledge of chemistry and its theories. - Inform students the role of Islamic scholars in chemistry progress. - Understanding the basic concepts of chemical industries. - Knowing the chemistry terminologies and symbols. - Knowing the different professional fields, natural abilities and how to make use of it in development in KSA. - Providing students the ability to use chemical apparatus. - Providing students to solve exercises, chemical equations and using references, books and scientific periodicals. - Knowing the well reports writing by developing ability to well expression. - Knowing that chemistry science is not separate from other sciences - Knowing all chemistry developments by reading scientific researches that concerns chemistry issues and solutions. - Understanding the regulations and technical requirements and how to improve them through time.
<p>(i) Summary description of the knowledge to be acquired</p> <ul style="list-style-type: none"> - Short cognitive tests. - Mid-term exams.

<ul style="list-style-type: none"> - Classroom assignments and discussion. - Scientific researches and follow up the new.
<p>(ii) Teaching strategies to be used to develop that knowledge</p> <ul style="list-style-type: none"> - Mid and final exams. - Assignments. - Researches.
<p>b. Cognitive Skills</p>
<p>(i) Cognitive skills to be developed and level of performance expected</p> <ul style="list-style-type: none"> - - Apply the results in a wide scope of issues and problems with simple guidance. - Able to use procedural methods and routine in a suitable way and state the situations required. - Finding solutions with rapid response according to the theory. - Applying the academic and theoretical criteria in teaching and researches - Understand the new proofs, information and concepts by evaluating them from different ways. - Test hypotheses by choosing an organized model and doing experiments with writing records down. - Create a safe and active environment in scientific and field labs - Searching the complex problems by using some techniques and other resources. - Suggest innovative solutions for problems taking into account the practical experiments and theoretical concepts. - Apply the skills and perceptions in an academic and professional contexts related to chemistry.
<p>(ii) Teaching strategies to be used to develop these cognitive skills</p> <ul style="list-style-type: none"> - Internal dialogues and discussions - Seminars - Exercises and questions - Assignments and quizzes.
<p>(iii) Methods of assessment of students cognitive skills</p> <ul style="list-style-type: none"> - Oral exams - Equations - Written exams
<p>c. Interpersonal Skills and Responsibility</p>
<p>(i) Description of the level of interpersonal skills and capacity to carry responsibility to be developed</p> <ul style="list-style-type: none"> - Simplify the issue constructive solutions in a group situations either he is a leader or a member. - Practicing the group leadership through different situations that required innovative responses. - Dealing with professional and moral issues that related to values.

<ul style="list-style-type: none"> - Responsible of his self-study. - Finding new information means and means of analysis by using them to achieve the task. - State the initiatives of issues that need a special care and confront them individually or in teamwork.
<p>(ii) Teaching strategies to be used to develop these skills and abilities</p> <ul style="list-style-type: none"> - Group lab experiments - Seminars and research Group. - Assignments and exercises. - Seminars.
<p>(iii) Methods of assessment of students interpersonal skills and capacity to carry responsibility</p> <ul style="list-style-type: none"> - Oral exams - Classroom discussions and questions - Course researches.
<p>d. Communication, Information Technology and Numerical Skills</p>
<p>(i) Description of the communication, IT and numerical skills to be developed</p> <ul style="list-style-type: none"> - written and oral communication - Program courses include too many students' skills and other information technology. - Using the information technology - Students can develop these skills by solving assignments or electronic resources or applying some e-learning programs. - Communication of students with staff members in field education or internet.
<p>(ii) Teaching strategies to be used to develop these skills</p> <ul style="list-style-type: none"> - Discussing female students during teaching - Requesting female students to write chemical equations on board - Pursing female students to do calculations
<p>(iii) Methods of assessment of students numerical and communication skills</p> <ul style="list-style-type: none"> - Oral questions and equations
<p>e. Psychomotor Skills (if applicable)</p>
<p>(i) Description of the psychomotor skills to be developed and the level of performance required</p> <ul style="list-style-type: none"> - Discussing female students while teaching - Requesting female students to write chemical equations on the board. - Pursing female students to do calculations.
<p>(ii) Teaching strategies to be used to develop these skills</p>

<ul style="list-style-type: none"> - Oral questions and equations
(iii) Methods of assessment of students psychomotor skills
<ul style="list-style-type: none"> - Students measure all chemical changes for lab experiments accurately. - Students choose the suitable chemical materials for experiments.

6. Admission Requirements for the program

Attach handbook or bulletin description of admission requirements including any course or experience prerequisites.
<ul style="list-style-type: none"> - Obtaining a secondary school certificate from Saudi Arabia or outside. - The obtaining should not exceed five years and the university council has the right to accept if there are persuasive reasons. - He should be well behaved. - He should be well build and pass any college examinations or interviews. - She should get permission from his work if he is an employee. - Should meets all conditions stated by university council (attach 8).

7. Attendance and Completion 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

1. Regulations or policies for allocation and distribution of grades

- **Attendance (attach 9)**
- **Progression from year to year (attach 10)**
- **Program completion (attach 11)**

If the institution, college, department or program has policies or regulations dealing with the allocation or distribution of students grades state the policy or regulation, or attach a copy.
<ul style="list-style-type: none"> - According to Ministry of Higher Education (attach 12)

2. 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.)

<ul style="list-style-type: none"> - Form a department internal committee for marking samples of exam sheets for each course 5%. - Unified exams for all groups that study the same course. - Marking these exams with unified criteria. (attach 13).

F Student Administration and Support

1. Student Academic Counselling

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

- **The main focus of academic advisory is the academic welfare for female students**
- **The responsibility of academic advisory is stated since there is a full committee for academic advisory from female staff members**
- **Each member is responsible for students till graduation**
- **Helping female students in schedules and solving all problems related to study**
- **Encourage them and follow up those who absent 15% in the first week and 20% in the fourth week.**
- **Providing all information about department and staff members.**
- **Providing students with program basic information and facilities that provide them a good educational environment which help them to learn and understand, facing difficulties and problems solutions and guide them to institutions that help them to solve problems.**
- **Informing students with regulations of educational processes.**
- **Helping students to achieve their study plans**
- **Caring the hand-capped students and the excellent too**
- **Helping students to discover their abilities, stating aims and taking decisions.**
- **Contributing the expected graduates to succeed in their potential life and contributing the fresh students too.**
- **Preparing the academic directory and distribute it among the fresh students in the beginning of the term.**
- **Specify a time for academic advisory for students and staff members with locating them in a special place.**
- **Linking some students' procedures with academic advisor to find a channel between student and staff member.**
- **Requesting each staff member to submit a report about academic advisory**
- **Doing questionnaires. (attach 14)**

2. Student Appeals

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

- **Regulation of Higher education**
- **Attached sheet exam marking (15)**

G. Text and Reference Material

1. What process is to be followed by faculty in the program for planning and acquisition of text, reference and other resource material including electronic and web based resources?

- **Establish a special library for department**
- **Providing books and references**
- **providing classrooms with computers and internet**
- **Participating in database to log on international publishing houses**

2. What processes are to be followed by faculty in the program for evaluating the adequacy of book,

reference and other resource provision?

- **Form a committee to revise books and references**
 - **Providing expensive books to enlighten students' burdens**
- Accredited Continuous revision**

H. Faculty and other Teaching Staff

1. Appointments

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

- **forming a committee for each special to sort out CVs and choose the best.**
- **Appointing the excellent from department female graduates as demonstrators through ads and has some requirements:**
 - a- **got an obtained degree from accredited university**
 - b- **good communications with female students**
 - c- **Social and scientific experience.**
 - **Providing staff members with Kpsi.**
 - **Providing the sufficient number of experienced staff members.**

2. Participation in Program Planning, Monitoring and Review

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

- **Forming academic committees (schedules, scientific research, post graduates studies, quality assurance security & safety and department council weekly)**
- **Activating the recommendations of committees and discuss them in council. (attach 17)**

3. Professional; Development

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

(a) Improvement of skills in teaching?

- **Training courses for staff members and follow them up by supervisor and doing questionnaire from female students to evaluate the course and guide the member to negative aspects and inviting female members to attend forums and conferences and scientific research.**
- **Encouraging staff members to embed their courses with their publications**
- **Reduce the administrative burdens to provide the staff members' efforts. (attach 18)**

(b) Other professional development including knowledge of research and developments in their field of teaching?

- **Using computer and smart board in teaching at classrooms and labs and inviting some specialists to deliver lectures**

4. Preparation of New Teaching Staff

Describe the process used for orientation and/or 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. <ul style="list-style-type: none">- Department appointment ad states the required documents and includes all about department and courses- Interviews with applicants by a special committee- Sort out applications according to their grades in university degree- Send chosen candidates to college to appoint them.	
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5. Part Time and Visiting 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 of total teaching staff etc.)

I. Program Evaluation and Improvement Processes

1. Effectiveness of Teaching

a. What processes will be used to evaluate and improve the strategies planned for developing learning in the different domains of learning? (e.g. 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) <ul style="list-style-type: none">- Different courses' questionnaires- Students' evaluation questionnaire for staff member- Internal program workshop- Student's experience questionnaire
b. What processes will be used for evaluating the skills of teaching staff in using the planned strategies? <ul style="list-style-type: none">- Evaluate the staff member from the program supervisor with an attached model (19)- Student's assessment questionnaire for the staff member

2. Overall Program Evaluation

a. What strategies will be 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? <ul style="list-style-type: none">- Polling the undergraduates and graduates- Polling the graduates- Interviews with chemistry teachers at schools- Guesting teachers and principals of program graduates- Attached template for program assessment- Attached template for female graduates
(ii) From independent advisors and/or evaluator(s)? <ul style="list-style-type: none">- Comparisons from different universities to specify the program courses- Consulting experienced advisers to evaluate the program
(iii) From employers and/or other stakeholders.

- **Guiding from skate holders and employment sectors**
- **Polling the governmental and private opinions for graduates**

b. What key performance indicators will be used to monitor and report annually on the quality of the program?

Statistical information:

- **Study the program environment- Study the program evaluation**
- **Explaining the course information – evaluate the teaching quality**
- **Program management and implementation – independent opinion about program quality**

c. What processes will be followed for reviewing these assessments and planning action to improve the program?

- **Improvement Plan:**
- **Establishing a library within Arabic and English languages.**
- **Establishing labs with equipment and tools**
- **Specifying some classrooms to receive extra students number**
- **Comparing the plan with other local and international universities with development to match the work place demands**
- **Establishing a partnership with public and private sectors to update the program**
- **Looking the local, national and international experiences**
- **Active partnership from staff members, students and graduates**
- **Cultural and academic cooperation in different universities, local and international institutions to achieve the plan quality and the program and doing visits**
- **Organizing with sectors to hold workshops and training courses**
- **Revising the self-evaluation and looking at strengths and weaknesses.**

location of Responsibilities for Learning Outcomes to Courses

Learning Outcomes	Courses													
Course Code and Number														
Knowledge Facts Concepts, theories Procedures														
Cognitive Skills Apply skills when asked Creative thinking and problem solving														
Interpersonal Skills and Responsibility														
Responsibility for own learning														

Group participation and leadership																	
Act responsibly-personal and professional situations																	
Ethical standards of behavior																	
Communication IT and Numerical Skills																	
Oral and written communication																	
Use of IT																	
Basic maths and statistics																	
Psychomotor Skills																	

√ Major Responsibility x Minor Responsibility

Program Outcomes according to NCAAA

- **Providing students a comprehensive chemical culture.**
- **Providing students the overall knowledge of chemistry and its theories.**
- **Inform students the role of Islamic scholars in chemistry progress.**
- **Understanding the basic concepts of chemical industries.**
- **Knowing the chemistry terminologies and symbols.**
- **Knowing the different professional fields, natural abilities and how to make use of it in development in KSA.**
- **Providing students the ability to use chemical apparatus.**
- **Providing students to solve exercises, chemical equations and using references, books and scientific periodicals.**
- **Knowing the well reports writing by developing ability to well expression.**
- **Knowing that chemistry science is not separate from other sciences**
- **Knowing all chemistry developments by reading scientific researches that concerns chemistry issues and solutions.**
- **Understanding the regulations and technical requirements and how to improve them through time.**