



جامعة الأمير سّام بن عبد العزيز  
PRINCE SATTAM BIN ABDULAZIZ UNIVERSITY  
COLLEGE OF APPLIED MEDICAL SCIENCES  
BIOMEDICAL TECHNOLOGY DEPARTMENT

## **Operational Plan**

**Bachelor of Biomedical Technology**

**2025-2026**

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# 1.Introduction to the program

The Biomedical Technology Department (BMT) is one of the four departments within the College of Applied Medical Sciences (CAMS) in Al Kharj. The department offers the Biomedical Technology Program and is currently offered to male students. The study period is four years, and the study at the college varies between theoretical and applied lectures (practical and clinical practices). After completion of the study period, the student spends a full year of mandatory clinical training in the biomedical departments of hospitals or biomedical companies.

The Biomedical Technology Program works to develop knowledge and practical production by preparing graduates with an elevated level of experience and positive behaviors. Their capabilities are reflected in building and developing their society by creating a competitive environment in the field of biomedical instrumentation technology.

## 1.1. Academic Program Data

College Name	College of Applied Medical Sciences in Al Kharj			
Program Name	Biomedical Technology			
Academic Degree Awarded by the Program	<input type="checkbox"/> Diploma	<input checked="" type="checkbox"/> Bachelor's	<input type="checkbox"/> Master's	<input type="checkbox"/> PhD
Years of Study in the Program	<input type="checkbox"/> 2 years	<input checked="" type="checkbox"/> 4 years	<input type="checkbox"/> 5 years	<input type="checkbox"/> 6 years
Number of Graduating Classes	<input type="checkbox"/> None	<input type="checkbox"/> One	<input checked="" type="checkbox"/> More	
Date of Plan Preparation (Hijri)	02/03/1447 H			
Date of Plan Preparation (Gregorian)	25/08/2025			
Academic Year of the Plan	1447H (2025-26)			

## 2. Program mission and goals

### 2.1. Mission

Qualifying distinguished competencies scientifically and skillfully in the field of biomedical technology, contributing to medical research and providing community services through an advanced academic environment.

### 2.2. Goals

1. Providing fundamental knowledge in basic sciences and biomedical instrumentation.
2. Qualifying distinguished graduates to be able to meet the needs of the labor market in the field of biomedical technology.
3. Inculcating lifelong learning and continuous self-development skills for graduates in the field of biomedical technology.
4. Preparing students for impactful contributions to research in healthcare technology.
5. Empowering graduates with the capacity to utilize their acquired biomedical engineering skills for community services.

### 3.Alignment of program, college, & university mission and objectives

#### 3.1. Alignment of program and college and university mission

		Program mission	
		Qualifying distinguished competencies scientifically and skillfully in the field of biomedical technology	Contributing to medical research and providing community services through an advanced academic environment
College mission	Providing distinguished educational programs scientifically and professionally	✓	
	Contributing to the promotion of scientific research and community partnership through the optimal investment of human and technical resources and building effective partnerships		✓
University mission	Delivering distinct education	✓	
	Developing ground-breaking research		✓
	Enhancing partnerships and social responsibility through a stimulating academic environment		✓
	Great-caliber human resources	✓	
	Cutting-edge technology		✓
	effective strategic partnerships and a supportive administrative system	-	-

### 3.2. Alignment of program and college and university goals

		Program goals				
		Providing fundamental knowledge in basic sciences and biomedical instrumentation	Qualifying distinguished graduates to be able to meet the needs of the labor market in the field of Biomedical Technology	Inculcating lifelong learning and continuous self-development skills for graduates in the field of Biomedical Technology	Preparing students for impactful contributions to research in healthcare technology	Empowering graduates with the capacity to utilize their acquired biomedical engineering skills for community services
College goals	Providing distinguished academic programs	✓	✓	✓		
	Attracting and retaining distinguished faculty members		✓		✓	
	Providing a stimulating environment for teaching and learning.		✓			
	Establishing postgraduate programs and promoting scientific research				✓	
	Continuous development and promotion of quality applications			✓		
	Promote community responsibility programs					✓
	Building effective strategic partnerships					✓
	Developing the College's own financial resources				✓	
University goals	Boosting the University status locally and globally.	✓				
	Empowering students to compete in the labor market.		✓			
	Attracting and developing distinguished human resources.		✓		✓	
	Continuous improvement of teaching and learning processes.			✓		
	Developing graduate studies and academic research programs.				✓	

	Continuous improvement of quality practices and applications.			✓		
	Establishing effective strategic partnerships.					✓
	Sustainability of the financial resources of the University.				✓	
	Improving a supportive administrative structure.				✓	✓
	Developing programs to support social responsibility.					✓

### 3.3. Alignment of program goals and KPIs

KPIs	Program Goals				
	Providing fundamental knowledge in basic sciences and biomedical instrumentation	Qualifying distinguished graduates to be able to meet the needs of the labor market in the field of Biomedical Technology	Inculcating lifelong learning and continuous self-development skills for graduates in the field of Biomedical Technology	Preparing students for impactful contributions to research in healthcare technology	Empowering graduates with the capacity to utilize their acquired biomedical engineering skills for community services
KPI-P-01	✓	✓			✓
KPI-P-02	✓	✓	✓	✓	
KPI-P-03	✓	✓			
KPI-P-04	✓	✓			
KPI-P-05	✓	✓	✓		
KPI-P-06a	✓	✓	✓	✓	✓
KPI-P-06b	✓	✓	✓	✓	
KPI-P-07	✓	✓	✓	✓	✓
KPI-P-08	✓	✓	✓	✓	✓
KPI-P-09				✓	✓
KPI-P-10				✓	✓
KPI-P-11				✓	

## 4. Program Annual Results

### 4.1. Program assessment

#### Strengths:

- All three major domains have total averages above 84%, which signifies a well-rounded, high-quality program.
- The alignment between strong direct performance and positive student perception (indirect scores) continues to be a major strength.
- The 'Values, Autonomy, and Responsibility' domain is the top-performing area.

#### Aspects that need improvement with priorities:

- Priority 1: PLO S3 is the lowest-performing outcome. While still a good score, it's a clear outlier compared to the other PLOs and should be the top priority for enhancement.

- Priority 2: The 'Skills' domain has the lowest average total score. This is primarily due to the lower scores in S2 and S3. A review of this domain would ensure it matches the exemplary performance of the 'Values' and 'Knowledge' domains.

### Improvement plan

- Perform a thorough analysis on PLO S3 to pinpoint the root cause of the lower score.
- Implement workshops or supplementary instruction modules focused specifically on S2 and S3.

## 4.2. Student's evaluation of program quality

Evaluation Date: 2025	
Students Feedback	Program Response
<b>Strengths</b> <ul style="list-style-type: none"> <li>• The instructors were available for consultation and advice when I needed to speak with them</li> <li>• The instructors were enthusiastic about the program</li> <li>• What I have learned in this program will be valuable for my future</li> <li>• The program has improved my skills in communication</li> </ul>	<ul style="list-style-type: none"> <li>• Maintain and improve these strengths.</li> </ul>
<b>Areas of Improvement</b> <ul style="list-style-type: none"> <li>• Student computing facilities were sufficient for my needs</li> <li>• Adequate facilities were available for extra curricular activities (including sporting and recreational activities)</li> <li>• The instructors in the program gave me helpful feedback on my work</li> </ul>	<ul style="list-style-type: none"> <li>• BMT plans to add a new computer lab</li> <li>• BMT plans to collaborate with CAMS to improve the facilities for extracurricular activities</li> <li>• BMT management will urge teaching staff to give feedback within a week after the internal assessments</li> </ul>
<b>Suggestions for improvement:</b> <ul style="list-style-type: none"> <li>• None</li> </ul>	With an overall rating of 4.2, BMT has to maintain the rating and work towards improving it.

## 4.3. Community partnership

BMT has successfully organized and collaborated with CAMS to conduct several community service activities. The number of activities has increased significantly compared to previous year. BMT plans to implement same number of activities (or more) in upcoming year, especially those involving high school students.

#### 4.4. Other evaluation

<b>Evaluation method: Faculty</b>	
<b>Summary of Evaluator Review</b>	<b>Program Response</b>
Overall feedback from faculty was positive for the program.	Maintain and improve all elements.
<b>Evaluation method: Alumni</b>	
<b>Summary of Evaluator Review</b>	<b>Program Response</b>
Program alumni believed that they possessed the skills to succeed in their jobs. However, BMT must focus more on improving learning resources and technologies, analytical and critical thinking skills, educational activities, and providing the students knowledge about labor market.	BMT will focus on providing labor market information and improve program related hands-on skills and increase educational and extracurricular activities. The teaching staff will focus on PLO-S3 and PLO-S4 teaching and assessment. BMT is in the process of improving its learning resources and technologies. The effect of all these initiatives will reflect on alumni perception in couple of years.
<b>Evaluation method: Employers</b>	
<b>Summary of Evaluator Review</b>	<b>Program Response</b>
BMT graduates' employers gave a very positive impression of program graduates in various aspects, especially professionalism, ethics, ability to withstand workload, and teamwork.	Maintain and improve all elements.

#### 4.5. Program KPIs

##### Strengths

- The Completion Rate (KPI-P-03) has leaped from 54.50% to 78.00%, surpassing the 60% target. This indicates that previous interventions to support student progression have been highly effective.
- Both Students' evaluation of quality of learning experience in the program (KPI-P-01) and Employers' evaluation of the program graduates' proficiency (KPI-P-07) have shown strong improvement, exceeding their targets and external benchmarks. The program is clearly succeeding in satisfying its key stakeholders.
- Rate of published research per faculty member (KPI-P-10) is above target benchmark, but less than last year as the papers submitted by the two new faculty members were not published yet.
- Percentage of publications of faculty members (KPI-P-09) is high and has improved compared to previous years, indicating a research-active faculty.
- The Graduates' Enrolment in Postgraduate Programs (KPI-P-06) has increased, with 5% of graduates now pursuing postgraduate studies, exceeding both the target (3%) and the external benchmark (4%).

### Areas and Priorities for Improvement

- Priority 1: Graduates' employability (KPI-P-06)
- Priority 2: First-Year Student Retention (KPI-P-04)
- Priority 3: Ratio of students to teaching staff (KPI-P-08)

### Improvement Plan

- Graduates' employability (KPI-P-06)
  - Get additional feedback from the planned department advisory committee.
  - Provide online or offline skills training and career counseling.
  - During the planned alumni event, gather feedback from alumni and employers about any skills gap, or an issue with how graduates present themselves.
- First-Year Student Retention (KPI-P-04)
  - Strengthen the first semester advising process.
  - Identify common issues faced by students who left.
- Ratio of students to teaching staff (KPI-P-08)
  - Ensure timely return of scholarship teaching staff.
  - Hire part-time faculty if needed.

### 4.6. Program development plan

No.	Priorities for Improvement	Actions	Action Responsibility
1	NCAAA accreditation	Submission of all required documents	Department
2	Master's degree program	Propose a Master's degree program	Curriculum, Timetables and Exams Committee
3	Receiving new laboratory equipment	Installation and usage of acquired equipment	Labs and Classrooms Committee
4	Library	Providing the library with the latest references in the field of specialization	Curriculum, Timetables and Exams Committee
5	Improve graduates' employability	Hold additional alumni events with employers' participation	Alumni committee
6	Provide programs to serve the community	Establish an IEEE student chapter, high school students outreach, etc.	Volunteering and Community Service Committee

## 5. Program operational plan details

Priorities for improvement	Initiatives– Activities	Responsibility	Follow-up official	Time	Performance indicators	
					Indicator	Target level
NCAAA accreditation	Submission of all required documents	Department	Department Council	1 <sup>st</sup> semester	Done	Yes/No
Improve the quality of the induction program for new students	Organizing department meeting for new students followed by laboratories visit	Head of Department	Department Council	Beginning of each semester	Number of student participation	100% new students
Improve facilities for extracurricular activities (including sporting and recreational activities)	Collaborate with CAMS to improve the facilities for extracurricular activities	Students Affairs and Academic advising	Department Council	2025-26	Student satisfaction rate	>4
Classrooms and laboratories	Installation and usage of acquired equipment	Labs and Classrooms Committee	Department Council	1 <sup>st</sup> semester	Install equipment	Yes/No
Improve instructor feedback on student work	Urge teaching staff to give feedback within a week after the internal assessments	Head of Department	Department Council	Beginning of each semester	Student satisfaction rate	>4
Improve student critical thinking skills	Urge teaching staff to focus on PLOs-S3,S4 in teaching and assessments	Head of Department	Department Council	Beginning of each semester	Alumni satisfaction rate	>4
Improve student satisfaction rate with quality of the courses	Increase students' participation in surveys	All faculty members	Department Council	2025-26	Number of respondents	Students 50%
Improve retention rate	Strengthen the first semester advising process.	Students Affairs and Academic advising	Department Council	2025-26	Done	Yes/No
	Identify common issues faced by students who left.				Done	Yes/No
Improve employer's satisfaction of program graduates	Increase participation rate for employers' surveys through contacting more employers	Alumni Committee	Department Council	2025-26	Number of respondents	Employers 15
	Hold additional alumni events with employers' participation	Alumni Committee	Department Council	2025-26	Number of participants	Alumni 40, Employers 15

Increase the number of faculty members (if needed)	Ensure timely return of scholarship teaching staff	Head of Department	Department Council	2025-26	Number of returned scholarship teaching staff	1
Improve graduates' employability	Establish a department advisory committee with industry leaders.	Department Council	Department Council	2025-26	Committee formed	Yes/No
	Provide online or offline skills training and career counseling.	Training and Clinical Affairs Committee	Department Council	2025-26	Number of events	4
Master's program proposal	Prepare submission documents including master and course description, administrative documents	Curriculum, Timetables and Exams Committee	Department Council	2 <sup>nd</sup> semester	Submit proposal	Yes/No
Increase citations	Encourage faculty to target high-impact journals	Scientific Research and Graduate Projects Committee	Department Council	2025-26	Citation rate	15
Improve research collaborations to encourage joint projects and publications	Encourage faculty to diversify their research collaborations	Scientific research and graduate projects committee	Department Council	2025-26	Number of joint publications	5
Department Research Unit	Establish Biomedical Technology Research Unit (BTRU)	Department	Department Council	2025-26	Done	Yes/No
Extracurricular activities	Provide workshops and/or scientific seminars	Biomedical Technology Research Unit (BTRU)	Department Council	2025-26	Number of sessions	4
National/International Hackathons and Innovation Events	Encourage faculty to participate in national/international hackathons and innovation events	Biomedical Technology Research Unit (BTRU)	Department Council	2025-26	Number of events	1
Provide programs to serve the community	Establish an IEEE student chapter and engage community volunteering	Volunteering and Community Service Committee	Department Council	2025-26	Student chapter established	Yes/No
	High school students' outreach	Volunteering and Community Service Committee	Department Council	2025-26	Number of outreach events	2
Student participation in discussion of student affairs	Invite student representatives from different levels to attend meetings discussing student affairs	Head of Department	Department Council	2025-26	Participation	2

<b>Authority*</b>	<b>Session number and date</b>
Department Council/Related Departments	Session 2 02/09/2025 (10/3/1447H)