Mathematics Operational Plan
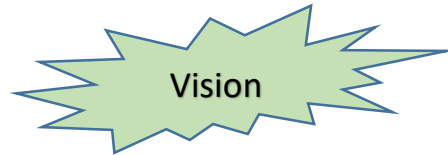
Overview:

As a result of the significant developments and challenges facing higher education in Saudi Arabia and the strong competition between relevant educational institutions at the national, regional and international levels, the Mathematics program (FSUT) was keen to play its pivotal role and fulfil its commitment to provide high-quality education tailored to meet the needs of the labor market.

This operational plan was derived from the vision and mission of the college, which emphasized excellence in mathematics education through the provision of advanced academic programs committed to international standards of excellence and quality in the fields of education, scientific research and community service. To achieve the program vision and mission, the operational plan presented a general description of the priority goals issues of the (FUST) in the form of practical and measurable goals. These goals directions focused on excellence in teaching and learning as well as the development of applied scientific research, and participation in community service. The design of this operational plan for the Mathematics program was based on the goals and KPIs of the University of Tabuk's strategic plan, from which the goals and KPIs of the College of Science's strategic plan originated. The design of this program has also depended upon the results of diagnosing the program's reality and the strengths and weaknesses realized in the program internal environment, as well as the opportunities and threats provided by the external environment.

The operational plan for this program includes a significant operational activity. Obtaining reliable statistics, using questionnaires, conducting systematic review procedures, advocating the formation of a research plan and committees, conducting surveys, and conducting training courses are all general elements of this operational plan.

The Vision and Mission of Mathematics Program goals

Vision

" Excellence in mathematics graduation and their applications to contribute to community development and scientific research "

Mission

" Providing mathematical and computing skills to graduates in an environment that encourages scientific research and community service. "

Mathematics Program goals:

1- Create a curriculum that promotes critical thinking, analysis, and the application of mathematical programs.

2- Raise students' academic achievement.

3- Strengthening and improving faculty and staff members' abilities.

4- Encourage participation in research programs and specialized scientific conferences.

5- Encourage effective community cooperation and communication.

6- Providing an efficient administrative and organizational environment

Matching of UT, FSUT, Mathematics Department and Mathematics Program's Goals:

UT Strategic Goals	FSUT Strategic Goals	Mathematics Department Goals	Mathematics Program's Goals
Goal1: Offering a distinguished university education that fulfils the needs of the labor market	Goal 1: Development of programs, plans and courses.	Goal 1: Creating a curriculum and educational process that meets accreditation and standards of quality.	Goal 1: Create a curriculum that promotes critical thinking, analysis, and the application of mathematical programs.
	Goal 2: Increase preventive and enrichment programs to support students' capabilities.	Goal 2: Motivating and assisting students in the learning, study, creation, and contributing to a positive social interaction.	Goal 2: Raise students' academic achievement.
	Goal 3: Strengthening and developing the capabilities of faculty and staff members.	Goal 3: Strengthening and enhancing the skills of faculty and staff.	Goal 3: Strengthening and improving faculty and staff members' abilities.
Goal 2:Supporting creative research for the enrichment of the knowledge economy.	Goal 4: Developing an environment supportive of scientific research.	Goal 4: Encouraging scientific and applied studies in various fields of mathematics.	Goal 4: Encourage participation in research programs and specialized scientific conferences.
Goal 3: Effective contribution to sustainable development and community services.	Goal 5: Promote fruitful partnership and effective communication between the college and the community.	Goal 5: Encourage successful collaboration and communication between the department and the community.	Goal 5: Encourage effective community cooperation and communication.

Goal 4: Developing the infrastructure, technology and services needed to provide an attractive and motivated educational environment.			
Goal 5; Developing an effective administrative and organizational environment at the university.	Goal 6: Developing an effective administrative and organizational environment in the college.	Goal 6: To create a collaborative environment between faculty and administrative staff in order to support the department's	Goal 6: Creating an efficient administrative and organizational environment.
Goal 6:Diversifying financial resources and improving financial efficiency.			

Mathematics Program Goals, Initiative, Operational Goals and KPI

Mathematics Program's Goals	Initiatives	Operational Goal	KPIs
Create a curriculum that promotes critical thinking, analysis, and the application of mathematical programs.	Periodic review of programs and plans in light of the labour market's needs	Review of plans, the program and courses.	The number of courses that are reviewed annually.
	Gain the program accreditation from national and international centres.	Achievement of program accreditation	Achievement of program accreditation certificates.
Raise students' academic achievement.	Offer remedial programs to students whose academic performances are low.	Treating students' academic failure and providing remedial programs	The number of remedial programs offering
	Providing academic adviser services to outstanding students	Providing academic adviser services to outstanding students	Number of academic adviser service's offering
	Identifying and developing the program students' talents	Presentation of products and models of activities and scientific projects carried out by students	The number of talents revealed
Strengthening and improving faculty and staff members' abilities.	Creating training courses to help faculty members improve their abilities in the field of teaching and learning in the program.	Improving the level of faculty members.	Percentage of faculty members who participate in training programs
Encourage participation in research programs and specialized scientific conferences.	Adopting a number of awards for excellent research researchers from within the faculty.	Raising the level of research efficiency and excellence in scientific research among faculty members	Number of award-winning researchers
	Conduct mutual research between academic departments and other faculties.	Enhancing joint research cooperation between faculty departments and other colleges in the university.	Number of interdisciplinary research
Encourage effective community cooperation and communication.	Develop cultured programs for the community.	Enriching the capabilities of community members through training programs.	The number of educational programs provided by the program to the community
	Encourage and motivate the university staff to do voluntary work to serve the community.	Serving the local community, its individuals and institutions through voluntary participation.	The proportion of program faculty and staff that participate in community volunteering activities

Mathematics Program Operational Plan Implementation

Mathematics Program Committees

Scientific Committee

Academic Affairs Committee

Scientific Research Committee

Development and Quality Committee

Program and Study Plan Committee

Operational Plan

Academic Affairs Committee

Offering remedial programs to students whose academic performances are low.

Providing academic adviser services to outstanding students

Identifying and developing the program students' talents

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Program and Study Plan Committee

Periodic review of programs and plans in light of the labour market's needs

Scientific Research Committee

Adopting a number of awards for excellent researchers within the faculty.

Conducting shared research between academic departments and other faculties.

Scientific Committee

-Creating training courses to help faculty members improve their abilities in the field of teaching and learning in the program.

Development and Quality Committee

Gaining the program accreditation from national and international centres.

Developing awareness and educational programs for community

Encouraging and motivating university staff to do voluntary work to serve the community

Progress Report on Operational Plan
2018 – 2020
Initiatives/Goals Accomplishment

and

Current Status & Action Plan Recommendations

Program goal	Initiatives	Operational goal	KPIs	Responsible parties	Year	2018	2019	2020	Average
goal 1: **Create a curriculum that promotes critical thinking, analysis, and the application of mathematical programs.**	Periodic review of programs and plans in light of the labor market's needs	Review of plans, program and courses.	The number of courses that are reviewed annually.	Programs and plans committee	**Target**	-	**8**	**8**	
					Achieved	-	**8**	**8**	
					Achievement rate (%)	-	**100%**	**100%**	**100%**

Assessment with comments and remarks:

- In 2018, the college faced difficulties with documentation due to the transition of the university administrative and management system from a traditional to a fully-electronic system in 2019.
- An Advisory Committee was established with the involvement of relevant labor market parties for reviewing the college's program and plans according to Saudi labor market needs.

Action plan recommendations:

Action	Responsible	Timescale
Revision of the mathematical Program study plan and learning outcomes with the committee.	Department head	**December 2021**

Program goal	Initiatives	Operational goal	KPIs	Responsible parties	Year	2018	2019	2020	Average
goal 1: Create a curriculum that promotes critical thinking, analysis, and the application of mathematical programs.	Gain the program accreditation from national and international centers.	Achievement of program accreditation requirements.	The achievement of program accreditation certificates.	Development and Quality Committee	**Target**	-	-	-	-
					Achieved	-	-	-	-
					Achievement rate (%)	-	-	-	-

Assessment with comments and remarks:
The program was submitted for final accreditation and waiting for the Accreditation Committee visit in December 2021.

Action plan recommendations:		
Action	**Responsible**	**Timescale**
Offering full support to College's Vice-Deanship for Development and Quality during the final accreditation process. Advice all faculty, staff, and students to be effectively involved in the Accreditation Committee visit.	Dean	Ongoing

Program goal	Initiatives	Operational goal	KPIs	Responsible parties	Year	2018	2019	2020	Average
Goal 2: Raise students' academic achievement.	Offer remedial programs to students whose academic performances are low.	Treating students' academic failure and providing remedial programs.	The number of curative program providing	Academic affairs Committee	**Target**	**1**	**2**	**3**	
					Achieved	**1**	**2**	**2**	
					Achievement rate (%)	**100%**	**100%**	**66.7%**	**83%**

Assessment with comments and remarks:

- Fluctuation in achievement rates is primarily attributed to fluctuations in the educational background of student batches admitted from pre-university education from year to year.
- An Academic Advisory Unit was established to offer help for low performers.   Lately, the college has offered orientation courses to freshmen students to improve their educational background in basic mathematical science and applications.
- One of the approaches adopted in this respect was measuring the educational wastage parameter to check the effect of the COVID-19pandemic and online learning on student performance.

Action plan recommendations:

Action	Responsible	Timescale
Regular meetings with students to collect their comments of teaching and exam results and give them feedback.	The courses' coordinators	Academic year 1443
Announcing the structure of the new academic advising program.	Academic affairs Committee	Academic year 1443
Regular meetings with students with low academic performance and their academic advisors.	Academic affairs Committee	Academic year 1443

Program goal	Initiatives	Operational goal	KPIs	Responsible parties	Year	2018	2019	2020	Average
Goal 2: Raise students' academic achievement.	Providing academic adviser services to outstanding students	Providing academic adviser services to outstanding students	Number of academic adviser service's offering	Academic Affairs Committee	**Target**	-	1	2	
					Achieved	-	1	0	
					Achievement rate (%)	-	١٠٠%	%٠	%٥٠

Assessment with comments and remarks:

- An Academic Advisory Unit was established to offer help for high G.P.A students in the program.

Action plan recommendations:

Action	Responsible	Timescale
Regular meetings with students to collect their comments of teaching and exam results and give them feedback.	The courses' coordinators	Academic year 1443
Announcing the structure of the new academic advising program.	Academic Affairs Committee	Academic year 1443
Regular meetings with students with outstanding academic performance and their academic advisors.	Academic Affairs Committee	Academic year 1443

Program goal	Initiatives	Operational goal	KPIs	Responsible parties	Year	2018	2019	2020	Average
Goal 2: Raise students' academic achievement.	Identifying and developing the program students' talents	Presentation of products and models of activities and scientific projects carried out by students	The number of talent revealed	Academic Affairs Committee	**Target**	-	-	1	
					Achieved	-	-	0	
					Achievement rate (%)	-	-	0%	0%

Assessment with comments and remarks:

- To ensure the contribution of all students in research, the Graduation Projects Committee has been established with the participation of all faculty members. The committee distributes students to faculty members and follow up on the progress of their research projects.
- The university started offering research funds for students to encourage their active participation in research activities. The university also funds the participation of students in local and international conferences.

Action plan recommendations:

Action	Responsible	Timescale
A new academic advising program has been formed for gifted and talented students.	Academic Affairs Committee	Academic year 1443
Creating programs for talented students to take advantage of the university's wide and diverse learning opportunities.	Academic Affairs Committee	Academic year 1443

Program goal	Initiatives	Operational goal	KPIs	Responsible parties	Year	2018	2019	2020	Average
Goal 3: Strengthening and improving faculty and staff members' abilities.	Creating training courses to help faculty members improve their abilities in the field of teaching and learning in the program.	Improving the level of faculty members.	Percentage of faculty members who participate in training programs	Scientific Committee	**Target**	-	**75%**	**80%**	
					Achieved	-	**75%**	**80%**	
					Achievement rate (%)	-	**100%**	**100%**	**100%**

Assessment with comments and remarks:

- The college was dependent on workshops offered and scheduled by the university to train faculty members.
- In 2020, the college started to offer training workshops for faculty members in such a way to cope with their busy teaching schedules.

Action plan recommendations:

Action	Responsible	Timescale
Increasing the number of training programs for faculty members.	Scientific Committee	Academic year 1443

Program goal	Initiatives	Operational goal	KPIs	Responsible parties	Year	2018	2019	2020	Average
Goal 4: Encourage participation in research programs and specialized scientific conferences.	Adopting a number of awards for excellent research researchers from within the faculty.	Raising the level of research efficiency and excellence in scientific research among faculty members	Number of award-winning researchers	Scientific Research Committee	**Target**	-	-	2	
					Achieved	-	-	2	
					Achievement rate (%)	-	-	100%	100%

Assessment with comments and remarks:

The gradual rise of achievement rate over three years from 2018 to 2020 is attributed to the university's measures to facilitate procedures and conditions of research a word of excellence in scientific research.

Action plan recommendations:

Action	Responsible	Timescale
Continue in offering the award of the best faculty member in scientific research.	The Dean	Academic year 1443
Recruiting more faculty members to lower the administrative loads and create more time for research.	The Dean	Academic year 1443
Fulfilling all labs needs with the required for research.	The Dean	Academic year 1443

Program goal	Initiatives	Operational goal	KPIs	Responsible parties	Year	2018	2019	2020	Average
Goal 4: Encourage participation in research programs and specialized scientific conferences.	Conduct shared research between academic departments and other faculties.	Enhancing joint research cooperation between faculty departments and other colleges in the university.	Number of interdisciplinary research	Scientific Research Committee	**Target**	**2**	**3**	**3**	
					Achieved	**2**	**3**	**3**	
					Achievement rate (%)	**100%**	**100%**	**100%**	**100%**

Assessment with comments and remarks:

- The number of departments in the college are effectively multidisciplinary, which is extremely advantageous to collaborative research.
- One of the University conditions to funding research is to conduct multidisciplinary research between different colleges within the university and between different departments within colleges.

Action plan recommendations:

Action	Responsible	Timescale
Planning to establish research partnerships with local and international universities and funding organizations.	The Dean	Academic year 1443
Continue in offering the award of the best faculty member in scientific research.	The Dean	Academic year 1443

Program goal	Initiatives	Operational goal	KPIs	Responsible parties	Year	2018	2019	2020	Average
Goal 5: Encourage effective community cooperation and communication.	Develop cultured programs for the community.	Enriching the capabilities of community members through training programs.	The number of educational programs provided by the program to the community		**Target**	2	2	2	
					Achieved	2	2	0	
					Achievement rate (%)	100%	100%	0%	66.7%

Assessment with comments and remarks:
Suspending for community service due to the COIV19 pandemic has a negative impact of 2020

Action plan recommendations:		
Action	**Responsible**	**Timescale**
Continue in offering the award of the best faculty member in community service.	The Dean	The academic year 1443
Encouraging and supporting the students club to participate more with community outreach.	The Vice-Dean	The academic year 1443

Program goal	Initiatives	Operational goal	KPIs	Responsible parties	Year	2018	2019	2020	Average
Goal 5: Encourage effective community cooperation and communication	Encourage and motivate the university staff to do voluntary work to serve the community.	Serving the local community, its individuals and institutions through voluntary participation.	Number of volunteer posts for faculty members.	Development and Quality Committee	**Target**	**40%**	**40%**	**45%**	
					Achieved	**35%**	**20%**	**0%**	
					Achievement rate (%)	**87.5%**	**50%**	**0%**	**45.8%**

Assessment with comments and remarks:

An annual plan is developed at the beginning of every academic year to schedule voluntary community service activities.
Faculty and the university both support voluntary activities.

Action plan recommendations:

Action	Responsible	Timescale
Continuing involvement with the local community.	Development and Quality	The academic year 1443
Continue in offering the award of the best faculty member in community service.	The Dean	The academic year 1443