

NCAAA Learning Outcomes for Mathematics Programmes

Domain	Code	NCAAA Student Outcomes
A	A1	Possesses a comprehensive, coherent and systematic body of knowledge in the study field, the underlying principles and basic theories associated with that field
	A2	Is aware of related knowledge and theories in other disciplines related to the field, and other professional fields, if it is professional field
	A3	Is familiar with the latest developments at the forefront of specializations within the main field of study including critical awareness of current research relating to resolution of issues and extension of knowledge
	A4	In programs preparing students for professional practice, graduates are aware of relevant conventions, regulations, and technical requirements and of how these may be modified over time in response to changing circumstances.
B	B1	Is able to undertake investigations, comprehend and evaluate new information, concepts and evidence from a range of sources
	B2	Apply conclusions to a wide range of issues and problems with limited guidance
	B3	Is able to investigate relatively complex problems using a range of information technology and other sources.
	B4	Recommend creative and innovative solutions taking account of relevant theoretical knowledge and practical experience and the consequences of decisions made
	B5	Can apply these skills and insights in professional and academic contexts relevant to the field of study undertaken.
	B6	Can use in professional programs routine procedures appropriately, but identify situations requiring innovative solutions and draw on relevant theoretical and practical insights in response
C	C1	Uses regular procedures in professional programs appropriately and benefits from relevant theoretical and practical ideas in identifying situations that require innovative solutions.
	C2	Can exercise group leadership in undefined situations calling for innovative responses

	C3	Shows initiative in identifying issues requiring attention and in addressing them appropriately on an individual or team basis
	C4	Takes responsibility for own learning and is able to identify and use means of finding new information or techniques of analysis needed for completion of tasks
	C5	Deals with ethical and professional issues involving values and moral judgments in ways that are sensitive to others and consistent with underlying basic values and relevant professional codes of practice
D	D1	When investigating issues and problems can identify relevant statistical or mathematical techniques and apply them creatively in interpreting information and proposing solutions.
	D2	Can communicate effectively both orally and in writing, selecting and using appropriate forms of presentation for different issues and audiences.
	D3	Uses in common (routine) the most appropriate information and communications technologies in gathering, interpreting and communicating information and ideas.
E		Skills that require psychosocial and motor stimulation in the use of a particular devices or tools such as printing, drawing and surgery, which is a skill associated with certain disciplines

Programme Learning Outcomes

Domain	Code	Programme Student Outcomes
A Knowledge	a.1	The ability to understand and apply fundamentals of mathematics in different fields
	a.2	Study and analysis of the modern academic researches which related to the recent progress in mathematics field
	a.3	Professional practice through the modern teaching strategies(e.g. micro teaching module)
B Cognitive skills	b.1	The ability to solve exercises, tutorials and make courses' researches
	b.2	Using computer programs to solve mathematical problems and exercises

	b.3	Using logical and creative thinking and be able to face and solve the problems
C Interpersonal skills & responsibility	c.1	The responsibly of self-learning by using books, references and scientific journals
	c.2	The ability to contact others through a research team work
	c.3	Practicing group leadership in deferent statements which needs Innovative responses
D Communication information, Technology, Numerical	d.1	Determine statistical or mathematical methods when studying issues and problems and applying them in a creative form
	d.2	The competition in the national and international post graduate studies
	d.3	Active oral and written contact and display the various issues to the different recipients in a suitable way
E Psychomotor		Not Applicable

Consistency between Student Learning Outcomes and NCAAA Outcomes

Code
MUP05

College: Education- Zulfi **Department:** Mathematics **Programme:** B.Sc.(Mathematics)

NCAAA Student Outcomes																				Programme Student Outcomes			
E NCAAA		D NCAAA			C NCAAA					B NCAAA					A NCAAA								
		D3	D2	D1	C5	C4	C3	C2	C1	B6	B5	B4	B3	B2	B1	A4	A3				A2	A1	
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																				b1	D		
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																				c1	Not Applicable		
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Not Applicable																					E		