



## GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES

#### **DEPARTMENT OF MATHEMATICS**

## DOCTOR OF PHILOSOPHY (PhD) PROGRAM

### **FIRST YEAR**

	FIRST SEMESTER									
COURSE	COURSE NAME	C/E	8 0 8 0			*				
CODE	COCADATATA	O/L	TH	AP	то	CR	EC			
MAT-6501	DIRECTED FIELD STUDIES	C	8	0	8	0	9			
MAT-6601	THESIS PREPARATION	C	0	1	1	0	1			
	ELECTIVE COURSE	Е	3	0	3	3	5			
	ELECTIVE COURSE	Е	3	0	3	3	5			
	ELECTIVE COURSE	Е	3	0	3	3	5			
	ELECTIVE COURSE	Е	3	0	3	3	5			
TOTA	, L		20	1	21	12	30			

	SECOND SEMESTER									
COURSE	COURSE NAME	C/E		COUR	SE CR	EDIT	*			
CODE		0/2	TH	AP	TO	CR	EC			
MAT-6502	DIRECTED FIELD STUDIES	C	8	0	8	0	9			
MAT-6602	THESIS PREPARATION	C	0	1	1	0	1			
	ELECTIVE COURSE	E	3	0	3	3	5			
	ELECTIVE COURSE	Е	3	0	3	3	5			
	ELECTIVE COURSE	Е	3	0	3	3	5			
	ELECTIVE COURSE	Е	3	0	3	3	5			
TOT	ГАЬ	-	20	1	21	12	30			





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### **SECOND YEAR**

	THIRD SEMESTER									
COURSE	COURSE NAME	C/E	·	COUR	SE CR	EDIT	*			
CODE	COCADATAMA	CIL	TH	AP	TO	CR	EC			
MAT-6503	DIRECTED FIELD STUDIES	C	8	0	8	0	9			
MAT-6603	THESIS PREPARATION	С	0	1	1	0	1			
MAT-6701	SEMINAR	С	0	2	2	0	5			
	ELECTIVE COURSE	Е	3	0	3	3	5			
	ELECTIVE COURSE	Е	3	0	3	3	5			
	ELECTIVE COURSE	Е	3	0	3	3	5			
TOTA	, L		17	3	20	9	30			

	FOURTH SEMESTER									
COURSE	COURSE NAME	C/E	(	COURSE CREDIT*			*			
CODE	COURSE NAME	C/E	TH	AP	то	CR	EC			
MAT-6504	DIRECTED FIELD STUDIES	С	8	0	8	0	9			
MAT-6604	THESIS	C	0	1	1	0	21			
TOTA	TOTAL				9	0	30			





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### THIRD YEAR

	FIFTH SEMESTER								
COURSE CODE	COURSE NAME	C/E	(	COURSE CREDIT					
	COURSE NAME	C/E	TH			CR	EC		
MAT-6505	DIRECTED FIELD STUDIES	C	8	0	8	0	9		
MAT-6605	THESIS	С	0	1	1	0	21		
TOTA	TOTAL		8	1	9	0	30		

	SIXTH SEMESTER									
COURSE COURSE NAME	COURSE NAME	C/E	(	COURSE CREDIT*						
	COOKSETATAVE	CIE	TH	AP	то		EC			
MAT-6506	DIRECTED FIELD STUDIES	C	8	0	8	0	9			
MAT-6606	THESIS	С	0	1	1	0	21			
TOTA	TOTAL			1	9	0	30			

#### **FOURTH YEAR**

	SEVENTH SEMESTER								
COURSE CODE	COURSE NAME	C/E	COU	COUR	SE CR	E CREDIT*			
	COURSE NAME	CIE	TH	AP	то	CR	EC		
MAT-6507	DIRECTED FIELD STUDIES	С	8	0	8	0	9		
MAT-6607	THESIS	С	0	1	1	0	21		
TOTA	TOTAL			1	9	0	30		

	EIGHTH SEMESTER									
COURSE CODE	COURSE NAME	C/E	(	EDIT	EDIT*					
	COURSE NAME	CIE	TH AP	AP	то	CR	EC			
MAT-6508	DIRECTED FIELD STUDIES	С	8	0	8	0	9			
MAT-6608	THESIS	С	0	1	1	0	21			
TOTA	TOTAL			1	9	0	30			

## **ELECTIVE COURSES**





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COURSE	COVIDGENALATE	G/F	(	COURSE CREDIT*				
CODE	COURSE NAME	C/E	TH	AP	TO	CR	EC	
FBE-5001	SCIENTIFIC RESEARCH AND METHODS	С	3	0	3	3	5	
MAT-6001	DISTRUBUTION THEORY AND FOURIER TRANSFORMATIONS I	E	3	0	3	3	5	
MAT-6002	DISTRUBUTION THEORY AND FOURIER TRANSFORMATIONS II	Е	3	0	3	3	5	
MAT-6003	SEMI-RIEMANNIAN GEOMETRY I	Е	3	0	3	3	5	
MAT-6004	SEMI-RIEMANNIAN GEOMETRY II	Е	3	0	3	3	5	
MAT-6005	ANALYTIC HYPERBOLIC GEOMETRY I	Е	3	0	3	3	5	
MAT-6006	ANALYTIC HYPERBOLIC GEOMETRY II	Е	3	0	3	3	5	
MAT-6007	WEB GEOMETRY I	Е	3	0	3	3	5	
MAT-6008	WEB GEOMETRY II	Е	3	0	3	3	5	
MAT-6009	METRIC GEOMETRY I	Е	3	0	3	3	5	
MAT-6010	METRIC GEOMETRY II	Е	3	0	3	3	5	
MAT-6011	DIFFERENTIABLE MANIFOLDS I	Е	3	0	3	3	5	
MAT-6012	DIFFERENTIABLE MANIFOLDS II	Е	3	0	3	3	5	
MAT-6013	MATRIX ANALYSIS I	Е	3	0	3	3	5	
MAT-6014	MATRIX ANALYSIS II	Е	3	0	3	3	5	
MAT-6015	ADVANCED FUNCTIONAL ANALYSIS I	Е	3	0	3	3	5	
MAT-6016	ADVANCED FUNCTIONAL ANALYSIS II	Е	3	0	3	3	5	
MAT-6017	PARTIAL DIFFERENTIAL EQUATIONS I	Е	3	0	3	3	5	
MAT-6018	PARTIAL DIFFERENTIAL EQUATIONS I	Е	3	0	3	3	5	
MAT-6019	BEHAVIOUR OF SOLUTONS OF DIFFERENCE EQUATIONS I	Е	3	0	3	3	5	
MAT-6020	BEHAVIOUR OF SOLUTONS OF DIFFERENCE EQUATIONS II	Е	3	0	3	3	5	
MAT-6021	QUADRATIC PLANE GEOMETRY I	Е	3	0	3	3	5	
MAT-6022	QUADRATIC PLANE GEOMETRY II	Е	3	0	3	3	5	
MAT-6023	SEQUENCE SPACES AND SUMMABILITY I	Е	3	0	3	3	5	
MAT-6024	SEQUENCE SPACES AND SUMMABILITY II	Е	3	0	3	3	5	
MAT-6025	DIVERGENT SERIES I	Е	3	0	3	3	5	
MAT-6026	DIVERGENT SERIES II	Е	3	0	3	3	5	
MAT-6027	MODULE THEORY I	Е	3	0	3	3	5	
MAT-6028	MODULE THEORY II	Е	3	0	3	3	5	
MAT-6029	FUNCTIONS OF COMPLEX VARIABLE I	Е	3	0	3	3	5	
MAT-6030	FUNCTIONS OF COMPLEX VARIABLE II	Е	3	0	3	3	5	
MAT-6031	POTENTIAL THEORY IN EUCLIDIAN SPACES I	Е	3	0	3	3	5	





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MAT-6032	POTENTIAL THEORY IN EUCLIDIAN SPACES II	Е	3	0	3	3	5
MAT-6033	COMPACT PROJECTIVE PLANES I	Е	3	0	3	3	5
MAT-6034	COMPACT PROJECTIVE PLANES II	Е	3	0	3	3	5
MAT-6035	INTEGRAL EQUATIONS I	Е	3	0	3	3	5
MAT-6036	INTEGRAL EQUATIONS II	Е	3	0	3	3	5
MAT-6037	ALGEBRA I	Е	3	0	3	3	5
MAT-6038	ALGEBRA II	Е	3	0	3	3	5
MAT-6039	FUNCTIONAL ANALYSIS METHODS IN SUMMABILITY THEORY I	Е	3	0	3	3	5
MAT-6040	OSCILLATION OF DYNAMIC EQUATIONS ON TIME SCALES I	Е	3	0	3	3	5
MAT-6041	OSCILLATION OF DYNAMIC EQUATIONS ON TIME SCALES II	Е	3	0	3	3	5
MAT-6042	INTEGRAL EQUATIONS I	Е	3	0	3	3	5
MAT-6043	INTEGRAL EQUATIONS II	Е	3	0	3	3	5
MAT-6044	REIMANNIAN GEOMETRY OF CONTACT AND SYMPLETIC MANIFOLDS I	Е	3	0	3	3	5
MAT-6045	MANIFOLDS I REIMANNIAN GEOMETRY OF CONTACT AND SYMPLETIC MANIFOLDS II	Е	3	0	3	3	5
MAT-6046	QUATERNIONS AND QUETERNION MATRICES I	E	3	0	3	3	5
MAT-6047	QUATERNIONS AND QUETERNION MATRICES II	E	3	0	3	3	5
MAT-6048	HYPERBOLIC GEOMETRY I	E	3	0	3	3	5
MAT-6049	HYPERBOLIC GEOMETRY II	E	3	0	3	3	5
MAT-6050	MATRIX TRANSFORMATION ON SEQUENCE SPACES I	E	3	0	3	3	5
MAT-6051	MATRIX TRANSFORMATION ON SEQUENCE SPACES II	Е	3	0	3	3	5
MAT-6052	GEOMETRY OF REAL INNER PRODUET SPACES I	Е	3	0	3	3	5
MAT-6053	GEOMETRY OF REAL INNER PRODUET SPACES II	Е	3	0	3	3	5
MAT-6054	NEW SEQUENCE SPACES DEFINED BY MATRICES I	Е	3	0	3	3	5
MAT-6055	NEW SEQUENCE SPACES DEFINED BY MATRICES II	Е	3	0	3	3	5
EGT-6001	DEVELOPMENT AND LEARNING	Е	3	0	3	3	5
EGT-6002	INSTRUCTIONAL PLANNING AND EVALUATION	Е	3	0	3	3	5