

COLLEGE OF ARTS AND SCIENCES APPROVED ACADEMIC PLAN MATHEMATICS MAJOR—OPTION 2 (REAL ANALYSIS SEQUENCE) PROGRAM YEAR 2020-21

1 ST YEAR						
1 ST SEMESTER	HOURS	2 ND SEMESTER	HOURS			
TROY 1101	1	ENG 1102/04	3			
ENG 1101/03	3	AREA II HUM/FA COURSE	3			
MTH 1125	4	AREA IV SS COURSE	3			
AREA II FINE ARTS COURSE	3	STAT 2210	3			
AREA IV SS COURSE	3	MTH 1126	4			
TOTAL	14	TOTAL	16			
	$2^{ND} Y$	EAR				
3 RD SEMESTER	HOURS	4 th SEMESTER	HOURS			
AREA II LIT COURSE	3	MTH 2220	3			
MTH 3318	3	REQ MTH COURSE	3			
MTH 2227	4	MINOR COURSE	3			
AREA IV HIS COURSE	3	AREA III SCI/LAB COURSE	3/1			
NAME OF THE OWNER OWNER OF THE OWNER OWNE		AREA II HUM/FA COURSE	3			
MINISTER OF BUILDING TO THE STATE OF THE STA						
TOTAL	13	TOTAL	16			
	3 RD Y					
5 TH SEMESTER	HOURS	6 th SEMESTER	HOURS			
DEO MTH COLIDCE	2	ADDROVED AMERICA	_			
REQ MTH COURSE	3	APPROVED MTH ELEC	3			
APPROVED MTH ELEC	3	APPROVED MTH ELEC APPROVED MTH ELEC	3			
APPROVED MTH ELEC FREE ELEC	3		3			
APPROVED MTH ELEC FREE ELEC MINOR COURSE	3 3 3	APPROVED MTH ELEC AREA IV SS COURSE MINOR COURSE	3 3 3			
APPROVED MTH ELEC FREE ELEC	3	APPROVED MTH ELEC AREA IV SS COURSE	3			
APPROVED MTH ELEC FREE ELEC MINOR COURSE AREA III SCI/LAB COURSE	3 3 3 3/1	APPROVED MTH ELEC AREA IV SS COURSE MINOR COURSE FREE ELEC	3 3 3 3			
APPROVED MTH ELEC FREE ELEC MINOR COURSE	3 3 3 3/1	APPROVED MTH ELEC AREA IV SS COURSE MINOR COURSE FREE ELEC TOTAL	3 3 3			
APPROVED MTH ELEC FREE ELEC MINOR COURSE AREA III SCI/LAB COURSE TOTAL	3 3 3 3/1 16 4 TH Y	APPROVED MTH ELEC AREA IV SS COURSE MINOR COURSE FREE ELEC TOTAL	3 3 3 3			
APPROVED MTH ELEC FREE ELEC MINOR COURSE AREA III SCI/LAB COURSE TOTAL 7TH SEMESTER	3 3 3 3/1 16 4 TH Y HOURS	APPROVED MTH ELEC AREA IV SS COURSE MINOR COURSE FREE ELEC TOTAL EAR 8 TH SEMESTER	3 3 3 3 15			
APPROVED MTH ELEC FREE ELEC MINOR COURSE AREA III SCI/LAB COURSE TOTAL 7 TH SEMESTER MTH 4424	3 3 3/1 16 4 TH Y HOURS 3	APPROVED MTH ELEC AREA IV SS COURSE MINOR COURSE FREE ELEC TOTAL EAR 8 TH SEMESTER APPROVED MTH ELEC	3 3 3 3 15 HOURS 3			
APPROVED MTH ELEC FREE ELEC MINOR COURSE AREA III SCI/LAB COURSE TOTAL 7 TH SEMESTER MTH 4424 MTH 4441	3 3 3/1 3/1 16 4 TH Y HOURS 3 3	APPROVED MTH ELEC AREA IV SS COURSE MINOR COURSE FREE ELEC TOTAL EAR 8 TH SEMESTER APPROVED MTH ELEC MINOR COURSE	3 3 3 3 15 HOURS 3			
APPROVED MTH ELEC FREE ELEC MINOR COURSE AREA III SCI/LAB COURSE TOTAL 7 TH SEMESTER MTH 4424 MTH 4441 MINOR COURSE	3 3 3/1 16 4 TH Y HOURS 3 3	APPROVED MTH ELEC AREA IV SS COURSE MINOR COURSE FREE ELEC TOTAL EAR 8 TH SEMESTER APPROVED MTH ELEC MINOR COURSE MINOR COURSE	3 3 3 3 15 HOURS 3 3			
APPROVED MTH ELEC FREE ELEC MINOR COURSE AREA III SCI/LAB COURSE TOTAL 7 TH SEMESTER MTH 4424 MTH 4441 MINOR COURSE FREE ELEC	3 3 3/1 16 4 TH Y HOURS 3 3 3	APPROVED MTH ELEC AREA IV SS COURSE MINOR COURSE FREE ELEC TOTAL EAR 8 TH SEMESTER APPROVED MTH ELEC MINOR COURSE MINOR COURSE FREE ELEC	3 3 3 3 15 HOURS 3 3 3			
APPROVED MTH ELEC FREE ELEC MINOR COURSE AREA III SCI/LAB COURSE TOTAL 7 TH SEMESTER MTH 4424 MTH 4441 MINOR COURSE FREE ELEC FREE ELEC	3 3 3/1 16 4 TH Y HOURS 3 3	APPROVED MTH ELEC AREA IV SS COURSE MINOR COURSE FREE ELEC TOTAL EAR 8 TH SEMESTER APPROVED MTH ELEC MINOR COURSE MINOR COURSE	3 3 3 3 15 HOURS 3 3			
APPROVED MTH ELEC FREE ELEC MINOR COURSE AREA III SCI/LAB COURSE TOTAL 7 TH SEMESTER MTH 4424 MTH 4441 MINOR COURSE FREE ELEC	3 3 3/1 16 4 TH Y HOURS 3 3 3	APPROVED MTH ELEC AREA IV SS COURSE MINOR COURSE FREE ELEC TOTAL EAR 8 TH SEMESTER APPROVED MTH ELEC MINOR COURSE MINOR COURSE FREE ELEC	3 3 3 3 15 HOURS 3 3 3			
APPROVED MTH ELEC FREE ELEC MINOR COURSE AREA III SCI/LAB COURSE TOTAL 7TH SEMESTER MTH 4424 MTH 4441 MINOR COURSE FREE ELEC FREE ELEC SUBMIT GRADUATION	3 3 3/1 16 4 TH Y HOURS 3 3 3	APPROVED MTH ELEC AREA IV SS COURSE MINOR COURSE FREE ELEC TOTAL EAR 8 TH SEMESTER APPROVED MTH ELEC MINOR COURSE MINOR COURSE FREE ELEC	3 3 3 3 15 HOURS 3 3 3			



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COMPLETE ALL REQUIREMENTS	(49 HOURS)

AREA I

TAKE THE FOLLOWING COURSES:

ENG 1101 COMP AND MODERN ENGLISH I 3 HOURS
ENG 1102 COMP AND MODERN ENGLISH II 3 HOURS
MINIMUM GRADE OF "C" REQ

AREA II

TAKE ANY 1000 2000 LEVEL COURSE IN LITERATURE

TAKE ANY 1000 2000 LEVEL COURSE WITH AN EXPANDED HISTORICAL

AND CULTURAL SCOPE IN FINE ARTS, INCLUDING THE DISCIPLINES OF
ART, MUSIC, THEATRE, FILM, OR OTHER FINE ARTS AREA.

TAKE ANY TWO 1000 2000 LEVEL COURSES WITH AN EXPANDED

6 HOURS
HISTORICAL AND CULTURAL SCOPE IN THE HUMANITIES/FINE ARTS
DISCIPLINES, INCLUDING ENGLISH, FOREIGN LANGUAGES, RELIGION,
PHILOSOPHY, CLASSICS, THEATRE, MUSIC, DANCE, COMMUNICATION,
SIGN LANGUAGE, INTERDISCIPLINARY STUDIES, OR OTHER HUMANITIES/
FINE ARTS AREAS.

NOTE: A SEQUENCE IN LITERATURE OR HISTORY IS REQUIRED. WHEN SELECTING COURSEWORK IN AREAS II OR IV, PLEASE CONSIDER THIS REQUIREMENT.

AREA III

MTH 1125 CALCULUS I
MINIMUM GRADE OF "C" REQ.

TAKE ANY TWO 1000-2000 LEVEL SCIENCE CLASSES (CLASS

AND CORRESPONDING LAB) FROM THE FOLLOWING SCIENCE
DISCIPLINES: BIOLOGY, CHEMISTRY, PHYSICS, PHYSICAL SCIENCE, OR OTHER
SCIENCE AREAS. SELECT 2: BIO 1100/L100, BIO 1101/L101, BIO 1120/L120,
BIO 2229/L229, CHM 1115/L115, CHM 1142/L142, CHM 1143/L143, CHM 2242/L242,
PHY 2252/L252, PHY 2253/L253, PHY 2262/L262, PHY 2263/L263, SCI 1110/L110 SCI 2233/L233,
SCI 2234/L234, SCI 2240/L240.

AREA IV

TAKE ANY 1000-2000 LEVEL COURSE WITH A PRIMARY FOCUS IN HISTORY.

TAKE THREE 1000-2000 LEVEL COURSE FROM THE FOLLOWING SOCIAL

SCIENCE DISCIPLINES: ANTHROPOLOGY, BUSINESS, CRIMINAL JUSTICE,
ECONOMICS, GEOGRAPHY, HISTORY, HUMAN SERVICES, LEADERSHIP,
INTERDISCIPLINARY STUDIES, NURSING, POLITICAL SCIENCE, PSYCHOLOGY,
RELIGION, SOCIAL WORK, SOCIOLOGY, OR OTHER SOCIAL SCIENCE AREAS.

NOTE: A SEQUENCE IN LITERATURE OR HISTORY IS REQUIRED. WHEN SELECTING COURSEWORK IN AREAS II OR IV, PLEASE CONSIDER THIS REQUIREMENT.

AREA V

TROY	1101	THE UNIVERSITY EXPERIENCE	1 HOUR
STAT	2210	INTRODUCTORY STATISTICS	3 HOURS
MTH	2220	COMPUTER PROGRAMMING FOR MATHEMATICS	3 HOURS

EVERY REASONABLE ATTEMPT TO ENSURE ACCURACY HAS BEEN MADE. SOME COURSES (SUCH AS DEVELOPMENTAL OR PRE-REQUISITE COURSES) ARE NOT REFLECTED IN THIS DEGREE MAP. COMPLETION OF DEGREE REQUIREMENTS IS BASED ON THE SPECIFIC CATALOG YEAR FOR EACH STUDENT:A MINIMUM OF 120 HOURS IS REQUIRED FOR ALL BACCALAUREATE DEGREE PROGRAMS.AT LEAST 25% OF THE CREDIT HOURS REQUIRED FOR THE DEGREE MUST BE COMPLETED IN RESIDENCY WITH TROY UNIVERSITY.AT LEAST 12 SEMESTER HOURS OF RESIDENCY MUST BE COMPLETED IN EACH MAJOR FIELD(S) OF STUDY.A MINIMUM GPA OF 2.0 OVERALL AND IN THE MAJOR IS REQUIRED TO GRADUATE.NOTE: PLEASE CONSULT THE COLLEGE OF ARTS AND SCIENCES OR CURRENT CATALOG FOR OTHER REQUIREMENTS NOT COVERED IN THIS DOCUMENT.NOTES: A SEQUENCE IN LITERATURE OR HISTORY IS REQUIRED. PLEASE CONSIDER THIS REQUIREMENT. WHEN SELECTING COURSE-WORK IN AREAS II 10 RI IV.



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MATHEMATICS MAJOR: OPTION 2 (REAL ANALYSIS SEQUENCE)	(38 HOURS)
MINIMUM 2.00 OVERALL GPA REQUIRED TAKE THE FOLLOWING COURSES:	
(MINIMUM GRADE OF 'C' REQUIRED) MTH 1126 CALCULUS II MTH 2227 CALCULUS III MTH 3311 DIFFERENTIAL EQUATIONS MTH 3318 INTRO TO ADVANCED MATHEMATICS MTH 3331 LINEAR ALGEBRA MTH 4424 REAL ANALYSIS I MTH 4441 ABSTRACT ALGEBRA I	4 HOURS 4 HOURS 3 HOURS 3 HOURS 3 HOURS 3 HOURS 3 HOURS
take Mth 4425 real analysis II or Mth 4442 numerical analysis	3 HOURS
SELECT 12 ADDITIONAL HOURS OF UPPER-LEVEL MATHEMATICS COURSES EXCLUDING MTH 4481 (MINIMUM GRADE OF 'C' REQUIRED)	12 HOURS
MINOR	(18 HOURS)
AT LEAST ONE 18 SEMESTER HOUR MINOR IS REQUIRED COMPLETE THIS DEGREE PROGRAM. ADDITIONAL MAJORS ARE ALSO ACCEPTABLE.	18 HOURS
FREE ELECTIVES REQUIREMENT	
TAKE 15 SEMESTER HOURS OF FREE ELECTIVE CREDIT.	15 HOURS