



Degree and Study Plan

College: Science
 Department: Mathematics
 Cohorts: 2021-2025
 Degree: Bachelor of Science
 Major: Mathematics

Summary of Credits:

University Requirements (UR)	6
Foundation Program	NC ⁺
Arabic	2
Oman: State and People	2
Oman & Islamic Civilization or Islamic Culture	2
University Electives (UE)	6
See SQU Deanship of A&R website	
College Requirements (CR)	3
See list B	
College Electives (CE)	16
See list C	
Departmental Requirements (DR)	19
See list D	
Departmental Electives (DE)	12
See list E	
Major Requirements (AR)	35
See list F	
Major Electives (AE)	25
See list G	
Specialization Requirements (SR)	
See list H	
Specialization Electives (SE)	
See list I	
Minor Requirements (IR)	++
See list J	++
Minor Electives (IE)	
See list K	
TOTAL	122

⁺ Not credited.

⁺⁺ Minor is optional: Total credits to earn a minor are 18. No more than 8 credits counting towards the major degree may count towards a minor.

For reference contact: Dr. M. Boulbrachene

Ext. 2348

HoD: Prof. Ahmad Al-Salman

Date: 6/13/2023

Dean's Office:

Date: 26/6/2023

Admissions and Registration:

Date:



Department of Mathematics
Mathematics Study Plan for Cohorts 2021-2025

Categories	Credits
University Requirements (UR)	6
University Electives (UE)	6
College Requirement (CR)	3
College Electives (CE)	16
Departmental Requirements (DR)	19
Departmental Electives (DE)	12
Major Requirements (AR)	35
Major Electives (AE)	25
Total	122

Semester 1	Course Code	Course Title	Cr.	Pre-Requisite/Co-Requisite*	Cat.
	ARAB1060 or ARAB1019	Arabic Arabic for Non-Arabic Speakers (3 CR)	2		UR
	HIST1010 or ISLAM1010	Oman & Islamic Civilization Islamic Culture	2		UR
	LANC2058	Communication in Science	3	FPEL0560 or FPEL0600 or FPEL0601 or FPEL0602 or FPEL0603 or FPEL0604	CR
	MATH2107	Calculus 1	4	FPEL0560 or FPEL0600 or FPEL0601 or FPEL0602 or FPEL0603 or FPEL0604 and (FPMT0105 or FPMT0108 or FPMT0109)	CE
	STAT2101	Introduction to Statistics	4	FPEL0560 or FPEL0600 or FPEL0601 or FPEL0602 or FPEL0603 or FPEL0604 and (FPMT0105 or FPMT0108 or FPMT0109)	CE
	Total		15		

Semester 2	SOCY1005or SOCY1007+	State and People Omani Contemporary Society (for non- Omani Citizens Only)	2		UR
	COMP2101	Introduction to Computer Science	4	FPEL0560 or FPEL0600 or FPEL0601 or FPEL0602 or FPEL0603 or FPEL0604 and (FPCS0101 or FPCS0102)	CE
	MATH2108	Calculus II	3	MATH2107	DR
	MATH2348	Foundations of Mathematics	4	MATH2107	DR
	STAT2102	Introduction to Probability	3	STAT2101 and (MATH2108* or MATH2109*)	DR
	Total	16			

Semester 3	MATH2202	Linear Algebra I	3	(MATH2348 or MATH2350) and LANC2058	DR
	MATH3111	Calculus III	3	(MATH2108 or MATH2109) and LANC2058	DR
	MATH3302	Ordinary Differential Equations	3	(MATH2108 or MATH2109) and LANC2058	AR
		College Elective	4		CE
		University Elective	2		UE
	Total		15		

Semester 4	MATH2351	Advanced Calculus	3	(MATH2348 or MATH2350) and MATH2108	DR
	MATH3303	Linear Algebra II	3	LANC2058 and MATH2202	AR
	MATH3360	Discrete Mathematics	3	LANC2058 and (MATH2348 or MATH2350)	AR
	MATH3730	Computer Algebra System I	2	LANC2058 and (MATH2202 or MATH2201) and MATH3302 and (MATH3110* or MATH3111* or MATH3171*)	AR
	MATH4141	Numerical Analysis	3	(MATH2202 or MATH2201) and MATH3302	AR
	Total		14		
Semester 5	MATH4451	Real Analysis	3	MATH2351	AR
	MATH4453	Abstract Algebra I	3	MATH2202 and (MATH2348 or MATH2350)	AR
		Departmental Elective	3		DE
		Major Elective	3		AE
		Major Elective	4		AE
	Total		16		

Semester 6	MATH4452	Introduction to Complex Variables	3	(MATH3111 or MATH3110 or MATH3171) and (MATH2348 or MATH2350)	AR
	MATH4474	Introduction to Partial Diff. Equations	3	MATH3302	AR
	MATH4351	Introduction to Metric Spaces	3	MATH2351 or MATH4450	AR
		Major Elective	3		AE
		Major Elective	3		AE
	Total		15		

Semester 7	MATH5101	Project in Mathematics – Part I	2	3 of the following courses MATH4141, MATH4450, MATH4451, MATH4452, MATH4453, MATH4474	AR
		Departmental Elective	3		DE
		Major Elective	3		AE
		Major Elective	3		AE
		University Electives (2 Courses)	4		UE
	Total		15		

Semester 8	MATH5102	Project in Mathematics – Part II	4	MATH5101	AR
		Departmental Elective	3		DE
		Department Elective	3		DE
		Major Elective	3		AE
		Major Elective	3		AE
	Total		16		

Department of Mathematics – Mathematics Degree Plan

Cohorts 2021-2025 Total Credits: 122

UNIVERSITY REQUIREMENTS (UR) (6 Credits)

Course code	Course Title	Credits	Pre-Requisite/Co-Requisite*
ARAB1060 or	Arabic	2	
ARAB1019	Arabic for Non-Arabic Speakers	3	
HIST1010 or ISLM1010	Oman & Islamic Civilization or Islamic Culture	2	
SOCY1005 or	Oman: State and People	2	
SOCY1007	Omani Contemporary Society (for non-Omani Citizens)		

Department of Mathematics – Math Degree Plan for Cohorts 2021-2025

LIST A: UNIVERSITY ELECTIVES (UR) (6 Credits)

See SQU Deanship of Admission and Registration website for the list of University Electives:

<https://sis.squ.edu.om/sis/webreg/3s/electiveTimeTable.jsp>

Department of Mathematics – Math Degree Plan for Cohorts 2021-2025

LIST B: COLLEGE REQUIREMENTS (CR) (3 Credits)

Course Code	Course Title	Credits	Pre-Requisite / Co-Requisite *
LANC2058	Communication in Science	3	FPEL0560 or FPEL0600 or FPEL0601 or FPEL0602 or FPEL0603 or FPEL0604

Department of Mathematics – Math Degree Plan for Cohorts 2021-2025

LIST C: COLLEGE ELECTIVES (CE) (16 Credits)

Course Code	Course Title	Credits	Pre-Requisite / Co-Requisite*
BIOL2101	General Biology I	4	FPEL0560 or FPEL0600 or FPEL0601 or FPEL0602 or FPEL0603 or FPEL0604

CHEM2101	General Chemistry I	4	FPEL0560 or FPEL0600 or FPEL0601 or FPEL0602 or FPEL0603 or FPEL0604 and (FPMT0105 or FPMT0108 or FPMT0109)
COMP2101 ⁺⁺	Introduction to Computer Science	4	FPEL0560 or FPEL0600 or FPEL0601 or FPEL0602 or FPEL0603 or FPEL0604 and (FPCS0101 or FPCS0102)
ERSC2101	Introduction to Geology I	4	FPEL0560 or FPEL0600 or FPEL0601 or FPEL0602 or FPEL0603 or FPEL0604
MATH2107 ⁺	Calculus I	4	FPEL0560 or FPEL0600 or FPEL0601 or FPEL0602 or FPEL0603 or FPEL0604 and (FPMT0105 or FPMT0108 or FPMT0109)
PHYS2101	General Physics I	4	FPEL0560 or FPEL0600 or FPEL0601 or FPEL0602 or FPEL0603 or FPEL0604 and (FPMT0105 or FPMT0108 or FPMT0109)
STAT2101 ⁺	Introduction to Statistics	4	FPEL0560 or FPEL0600 or FPEL0601 or FPEL0602 or FPEL0603 or FPEL0604 and (FPMT0105 or FPMT0108 or FPMT0109)

⁺MATH2107 is an important pre-requisite course for Mathematics departmental requirements.

⁺⁺COMP2101 and STAT2101 are required courses for the Mathematics degree.

Credits taken in excess of 16 in List C can be counted as Major Electives.

Department of Mathematics – Math Degree Plan for Cohorts 2021-2025

LIST D: DEPARTMENTAL REQUIREMENTS (DR) (19 Credits)

Course Code	Course Title	Credits	Pre-Requisite / Co-Requisite*
MATH2108	Calculus II	3	MATH2107
MATH2348	Foundations of Mathematics	4	MATH2107
MATH2202	Linear Algebra I	3	(MATH2348 or MATH2350) and LANC2058
MATH2351	Advanced Calculus	3	MATH2108 and (MATH2348 or MATH2350)
MATH3111	Calculus III	3	(MATH2108 or MATH2109) and LANC2058
STAT2102	Introduction to Probability	3	STAT2101 and (MATH2108* or MATH2109*)

Department of Mathematics – Math Degree Plan for Cohorts 2021-2025

LIST E: DEPARTMENTAL ELECTIVES (DE) (12 Credits)

Code	Title	Credits	Pre-Requisite / Co-Requisite *
12 credits from the following courses			
MATH4573	Graph Theory	3	LANC2058 and MATH3360
MATH3744	Introduction to Mathematical Modeling	3	LANC2058 and (MATH3111 or MATH3110 or MATH3171) and MATH3302
MATH4456	Abstract Algebra II	3	MATH4453

MATH4473	Linear Programming	3	MATH2202 or MATH3171 or MATH2201
MATH4481	Introduction to Optimization	3	(MATH2108 or MATH2109) and (MATH2202 or MATH2201 or MATH3171)
MATH4552	Logic and Set Theory	3	MATH2348 or MATH2350
MATH4599	Introduction to Topology	3	MATH2348 or MATH2350
MATH5470	Integral Transforms	3	MATH4474 and MATH4452*
MATH5551	Fluid Dynamics	3	MATH4474
MATH5553	Differential Geometry	3	(MATH3111 or MATH3110) and MATH3303
MATH5558	Introduction to Number Theory	3	MATH2348 or MATH2350

Credits taken in excess of 12 in List E can be counted as Major Electives.

Department of Mathematics – Math Degree Plan for Cohorts 2021-2025

LIST F: MAJOR REQUIREMENTS (AR) (35 Credits)

Course Code	Course Title	Credits	Pre-Requisite / Co-Requisite*
MATH3302	Ordinary Differential Equations	3	LANC2058 and (MATH2108 or MATH2109)
MATH3303	Linear Algebra II	3	LANC2058 and MATH2202
MATH3360	Discrete Mathematics	3	LANC2058 and MATH2348 or MATH2350)
MATH3730	Computer Algebra System I	2	LANC2058 and MATH3302 and (MATH3110* or MATH3111* or MATH3171*)
MATH4141	Numerical Analysis	3	(MATH2202 or MATH2201) and MATH3302)
MATH4451	Real Analysis	3	MATH2351
MATH4452	Introduction to Complex Variables	3	(MATH3111 or MATH3110 or MATH3171) and (MATH2348 or MATH2350)
MATH4351	Introduction to Metric Spaces	3	MATH2351 or MATH4450
MATH4453	Abstract Algebra I	3	MATH2202 and (MATH2348 or MATH2350)
MATH4474	Introduction to Partial Differential Equations	3	MATH3302
MATH5101	Project in Mathematics – Part I	2	MATH4141, MATH4450, MATH4451, MATH4452, MATH4453, MATH4474
MATH5102	Project in Mathematics – Part II	4	MATH5101

Department of Mathematics Degree Plan for Cohorts 2021-2025

LIST G. MAJOR ELECTIVES (AR 35 Credits)

“All College of Science courses not used for required courses (Lists A, B, C, D, E, F, G, H, I, J, and K) can be taken as major electives”.

Refer to the Major Electives page on the College Website:

<https://www.squ.edu.om/science/Academic-Programs/Undergraduate-Programs/Major-Electives>

**Department of Mathematics Degree Plan
Cohorts 2021-2025
MINORS AVAILABLE TO MATHS MAJORS**

LISTS J and K: MINOR REQUIREMENTS and ELECTIVES (18 Credits)

Refer to the Minor list on the College Website to see the available minors and their requirements:

<https://www.squ.edu.om/science/Academic-Programs/Undergraduate-Programs>

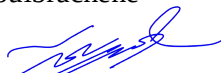
* Students are required to complete 18 Credits in the minor courses to qualify for a minor.

* Courses counting towards an approved Minor may substitute courses listed as Major Electives (List G) but no more than 8 credits counting towards the Major degree (lists C, D, E, F) may count towards Minor.

* Students should take a minor different than their major

For reference contact: Dr. Messaoud Boulbrachene

Ext. 2348



Approved by Dean of Science: Dr. Talal Al Hosni

Date: 26/6/2023



Office of Admissions & Registration: _____

Confirmed: _____