

COMPUTATIONAL MATHEMATICS—BS Program
Study Abroad Pathway – Option 1
(last revised September 2016)

Table 1a: Undergraduate Program Schedule

These undergraduate program schedules are subject to change.

Please verify information with your academic advisor and/or School representative before planning your study abroad trip.

Term: FALL 1		Check course classification (s)			
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)
MATH-181 Project-Based Calculus I P7-1	4	4			
MATH-199 Math and Statistics Seminar	1		1		
LAS P1	3	3			
LAS P2	3	3			
CSCI-141 Computer Science I	4	4			
Term credit total:	15	14	1		
Term: FALL 2 – STUDY ABROAD		Check course classification (s)			
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)
MATH-221 Multivariable and Vector Calculus	4	4			MATH-182
MATH-231 Differential Equations	3		3		MATH-182
LAS P3	3	3			
LAS Elective 1	3	3			
LAS Elective 2	3	3			
Term credit total:	16	13	3		
Term: FALL 3		Check course classification (s)			
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)
MATH-431 Real Variables I	3		3		MATH-200, -221
SWEN-261 Software Engineering	3		3		CSCI-142
Program Elective 2	3		3		
CSCI-262 Introduction to Computer Science Theory	3		3		MATH-200 and CSCI-141
MATH-411 Numerical Analysis	3		3		MATH-231, -241
Wellness 2	0				
Term credit total:	15	0	15		
Term: SPRING 1		(Check course classification (s))			
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)
MATH-182 Project-Based Calculus II P7-2	4	4			MATH-181
CSCI-142 Computer Science II	4	4			CSCI-141
Science I P5*	3	3			
First-Year Writing WI	3	3			
Wellness 1	0				
Term credit total:	14	14			
Term: SPRING 2		(Check course classification (s))			
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)
MATH-241 Linear Algebra	3		3		MATH-221
MATH-251 Probability and Statistics I	3		3		MATH-182
CSCI-243 The Mechanics of Programming	3		3		CSCI-142
MATH-200 Discrete Mathematics with Introduction to Proof	3		3		MATH-182
Science II P6	3	3			Science I
Term credit total:	15	3	12		
Term: SPRING 3		(Check course classification (s))			
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)
MATH-441 Abstract Algebra I	3		3		MATH-200, -241
LAS P4	3	3			
Program Elective 3	3		3		
MATH-399 Mathematical Science Job Search Seminar	0		0		
LAS Immersion I	3	3			
Program Elective 1	3		3		
Term credit total:	15	6	9		

Term: FALL 4		Check course classification (s)				
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)	
MATH-421 Mathematical Modeling (WI)	3		3		MATH-221, -231, -241, -251	
MATH-412 Numerical Linear Algebra or MATH-351 Graph Theory	3		3		MATH-221, -231, -341 [or MATH 200]	
LAS Immersion 2	3	3				
Program Elective 4	2		2			
Open Elective 1	3					
Term credit total:	14	3	8			

Term: SPRING 4		Check course classification (s)				
Course Number & Title	CR	LAS	Maj	New	Prerequisite(s)	
Program Elective 5	2		2			
MATH-500 Senior Capstone in Mathematics**	3		3		MATH-411, -421, & (-431 or -441)	
Open Elective 2	3					
LAS Immersion 3	3	3				
LAS Elective 3	3	3				
Open Elective 3	2					
Term credit total:	16	6	5			

Program Totals:	Credits: 120	Liberal Arts & Sciences: 61	Major: 51	Elective & Other: 8
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Cr: credits LAS: liberal arts & sciences Maj: major requirement New: new course Prerequisite(s): list prerequisite(s) for the noted courses

Additional Notes:

1. Students are required to earn passing marks on both a *first-year paper* (typically written in MATH-199) and a *third-year paper* (typically written in MATH-421). These papers are reviewed and assessed by the SMS Writing Committee.
2. Students are required to complete an *experiential learning* component of the program, as approved by the School of Mathematical Sciences.
3. Two of the five program electives must be courses with the MATH prefix. Two of the five program electives must be CSCI courses, and the remaining program elective can be either MATH or CSCI.

Footnotes:

* Students will satisfy the science requirements by taking either a 3-credit or 4-credit lab science course. If a science course consists of separate lecture and laboratory sections, the student **MUST** take both the lecture and lab portions to satisfy the requirement. The lecture alone will not fulfill the requirement.

** Students who have not otherwise fulfilled their experiential learning requirement must take MATH-500 Senior Capstone in Mathematics. Students who have completed the experiential learning requirement in some other way (as approved by the RIT School of Mathematical Sciences) may use this cell in the program mask as a program elective