Name:			
SID #:			

PURE MATH COURSEWORK
MATH Bachelor of Science (Fall 2022 & previous)

BREADTH REQUIREMENTS (180 units minimum to graduate, 216 max)			MATH Core Requirement Lower-Div Entire major GPA must completed with at least a 2.00 GPA			MATH PURE MATHEMATICS Upper-Division Coursework (52 units)
Common Breadth Courses			**Course Offerings**			**Course Offerings**

English (12 units) - Grade of "C" or better is required			Course Name	Units	Completed	36 units of upper-div to include at
Course Name	Units	Completed	MATH009A	4		least 24 units from the following:
ENGL001A	4		MATH009B	4		Course Name / Units / Grade
ENGL001B	4		MATH009C	4		MATH131 — 4
ENGL001C	4		MATH031	5		MATH132 — 4
HUMANITIES (12 units minimum)			**CS010A**	4		MATH145A — 4
One (1) course from: World History 10, 15, or 20			MATH010A	4		MATH145B — 4
			MATH010B	4		MATH151A — 4
One (1) course in: fine arts, literature, philosophy, or religious studies			MATH046	4		MATH151B — 4
			CS011 is recommended			MATH151C — 4
One (1) additional humanities course			Year of Science BIOL005, CHEM001, or PHYS040 Series			MATH171 — 4
						MATH172 — 4
SOCIAL SCIENCES (12 units minimum)						At least 3 courses from above must be:
One (1) course in: economics, political science						MATH145A
						MATH145B
One (1) course in: anthropology, psychology, sociology			Please refer to prerequisite requirements for all MATH courses.			MATH151A
						MATH151B
One (1) additional social sciences course						MATH151C
			Please note: MATH144 is a prerequisite requirement for MATH145A and MATH150A (also requires MATH009C & MATH010B with C- or better). Plan accordingly.			16 additional upper-div
ETHNIC STUDIES (4 units minimum)						— 4
May count towards addt'l humanities or addt'l social sciences, but not both						— 4
						— 4
BIOLOGICAL SCIENCES (4 units minimum)						— 4
			Refer to your university catalog year and degree audit for specific course listings and all major requirements.			(if needed) (4)
MATHEMATICS (4 units minimum)						(if needed) (4)
						(if needed) (4)
PHYSICAL SCIENCE (4 units minimum)						
Two additional 4-unit courses from life sciences or physical science						

UNIVERSITY OF CALIFORNIA
UC RIVERSIDE

CNAS Academic Advising Center

Name:				GENERAL APPLIED MATH COURSEWORK			
SID #:				MATH Bachelor of Science (Fall 2022 & previous)			

BREADTH REQUIREMENTS (180 units minimum to graduate, 216 max)			MATH Core Requirement Lower-Div Entire major GPA must completed with at least a 2.00 GPA			MATH General Applied Concentration Upper-Division Coursework	
Common Breadth Courses			**Course Offerings**			**Course Offerings**	
English (12 units) - Grade of "C" or better is required			Course Name	Units	Completed	The following must be taken from the MATH General Core Concentration	
Course Name	Units	Completed	MATH009A	4			
ENGL001A	4		MATH009B	4		Course Name	Units	Grade
ENGL001B	4		MATH009C	4		MATH131	4	
ENGL001C	4		MATH031	5		MATH135A&B or 149A&B	8	
HUMANITIES (12 units minimum)			**CS010A**	4		MATH146A	4	
One (1) course from: World History 10, 15, or 20			MATH010A	4		MATH146B	4	
			MATH010B	4		MATH146C	4	
One (1) course in: fine arts, literature, philosophy, or religious studies			MATH046	4		General MATH Option Area must take the following:		
			CS011 is recommended				
One (1) additional humanities course			Year of Science BIOL005, CHEM001, or PHYS040 Series			MATH150A or MATH151A	4	
						MATH168	4	
SOCIAL SCIENCES (12 units minimum)						16 units from the following:		
One (1) course in: economics, political science						MATH120	4	
						MATH121	4	
One (1) course in: anthropology, psychology, sociology			Please refer to prerequisite requirements for all MATH courses.			MATH126	4	
						MATH141	4	
One (1) additional social sciences course						MATH149A	4	
			Please note: MATH144 is a prerequisite requirement for MATH145A and MATH150A (also requires MATH009C & MATH010B with C- or better). Plan accordingly.			MATH149B	4	
ETHNIC STUDIES (4 units minimum)						MATH151B	4	
May count towards addt'l humanities or addt'l social sciences, but not both						MATH165A	4	
						MATH165B	4	
BIOLOGICAL SCIENCES (4 units minimum)						Please review course offerings for course availability and appropriate course planning.		
			Refer to your university catalog year and degree audit for specific course listings and all major requirements.				
MATHEMATICS (4 units minimum)							
PHYSICAL SCIENCE (4 units minimum)							
Two additional 4-unit courses from life sciences or physical science							

UC RIVERSIDE — UNIVERSITY OF CALIFORNIA

CNAS Academic Advising Center

Name:				**MATH APPLIED BIOL COURSEWORK**			
SID #:				MATH Bachelor of Science (Fall 2022 & previous)			

BREADTH REQUIREMENTS (180 units minimum to graduate, 216 max)			**MATH Core Requirement Lower-Div** Entire major GPA must completed with at least a 2.00 GPA			**MATH BIOL Option Concentration** Upper-Division Coursework	
Common Breadth Courses			**Course Offerings**			**Course Offerings**	
English (12 units) - Grade of "C" or better is required			Course Name	Units	Completed	The following must be taken from the MATH BIOL Core Concentration	
Course Name	Units	Completed	MATH009A	4			
ENGL001A	4		MATH009B	4		Course Name	Units	Grade
ENGL001B	4		MATH009C	4		MATH131	4	
ENGL001C	4		MATH031	5		MATH135A&B or 149A&B	8	
HUMANITIES (12 units minimum)			**CS010A**	4		MATH146A	4	
One (1) course from: World History 10, 15, or 20			MATH010A	4		MATH146B	4	
			MATH010B	4		MATH146C	4	
One (1) course in: fine arts, literature, philosophy, or religious studies			MATH046	4		BIOL Option Area must take the following:		
			CS011 is recommended				
One (1) additional humanities course			Year of Science			MATH149A	4	
						2 courses from the following:		
SOCIAL SCIENCES (12 units minimum)			BIOL005A/05LA	5		MATH120	4	
One (1) course in: economics, political science			BIOL005B	4		MATH121	4	
			BIOL005C	4		MATH135A	4	
One (1) course in: anthropology, psychology, sociology			Please refer to prerequisite requirements for all MATH courses.			MATH135B	4	
						MATH149B	4	
One (1) additional social sciences course			Please note: MATH144 is a prerequisite requirement for MATH145A and MATH150A (also requires MATH009C & MATH010B with C- or better). Also review upper-div BIOL preqs. Plan accordingly.			**BIOL Upper-Division, must take:**		
						BIOL102	4	
ETHNIC STUDIES (4 units minimum)						BIOL105	4	
May count towards addt'l humanities or addt'l social sciences, but not both						BIOL108	4	
						4 additional units of upper-division BIOL		
BIOLOGICAL SCIENCES (4 units minimum)							4	
			Refer to your university catalog year and degree audit for specific course listings and all major requirements.			Please review course offerings for course availability, prerequisites, and appropriate course planning.		
MATHEMATICS (4 units minimum)								
PHYSICAL SCIENCE (4 units minimum)								
Two additional 4-unit courses from life sciences or physical science								

UNIVERSITY OF CALIFORNIA UC RIVERSIDE

CNAS Academic Advising Center

Name:				MATH APPLIED CHEM COURSEWORK		
SID #:				MATH Bachelor of Science (Fall 2022 & previous)		

BREADTH REQUIREMENTS (180 units minimum to graduate, 216 max) Common Breadth Courses			MATH Core Requirement Lower-Div Entire major GPA must completed with at least a 2.00 GPA Course Offerings			MATH CHEM Option Concentration Upper-Division Coursework Course Offerings
English (12 units) - Grade of "C" or better is required			Course Name	Units	Completed	The following must be taken from the
Course Name	Units	Completed	MATH009A	4		MATH CHEM Core Concentration
ENGL001A	4		MATH009B	4		Course Name / Units / Grade
ENGL001B	4		MATH009C	4		MATH131 / 4
ENGL001C	4		MATH031	5		MATH135A&B or 149A&B / 8
HUMANITIES (12 units minimum)			CS010A	4		MATH146A / 4
One (1) course from: World History 10, 15, or 20			MATH010A	4		MATH146B / 4
			MATH010B	4		MATH146C / 4
One (1) course in: fine arts, literature, philosophy, or religious studies			MATH046	4		CHEM Option Area must take 3 from the following:
			CS011 is recommended			
One (1) additional humanities course			Science Sequences for applied CHEM			MATH120 / 4
						MATH135A / 4
SOCIAL SCIENCES (12 units minimum)			CHEM001A/01LA	5		MATH135B / 4
One (1) course in: economics, political science			CHEM001B/01LB	5		MATH149A / 4
			CHEM001C/01LC	5		MATH149B / 4
One (1) course in: anthropology, psychology, sociology			PHYS040A	5		MATH165A / 4
			PHYS040B	5		MATH165B / 4
One (1) additional social sciences course			PHYS040C	5		CHEM Upper-Division, must take:
			Please note: MATH144 is a prerequsite requirement for MATH145A and MATH150A (also requires MATH009C & MATH010B with C- or better). Also review upper-div CHEM preqs. Plan accordingly.			CHEM110A / 4
ETHNIC STUDIES (4 units minimum)						CHEM110B / 4
May count towards addt'l humanities or addt'l social sciences, but not both						CHEM111 / 4
						CHEM113 / 4
BIOLOGICAL SCIENCES (4 units minimum)						Additional 4 units of upper-div CHEM
						4
MATHEMATICS (4 units minimum)			Refer to your university catalog year and degree audit for specific course listings and all major requirements. Be aware potential time conflicts between CHEM110 and MATH146 series			Please review course offerings for course availability, prerequisites, and appropriate course planning.
PHYSICAL SCIENCE (4 units minimum)						
Two additional 4-unit courses from life sciences or physical science						

UC RIVERSIDE — UNIVERSITY OF CALIFORNIA

CNAS Academic Advising Center

Name:				MATH APPLIED ECON COURSEWORK				
SID #:				MATH Bachelor of Science (Fall 2022 to 2020 catalog)				

BREADTH REQUIREMENTS (180 units minimum to graduate, 216 max)			MATH Core Requirement Lower-Div Entire major GPA must completed with at least a 2.00 GPA			MATH ECON Option Concentration Upper-Division Coursework		
Common Breadth Courses			Course Offerings			Course Offerings		
English (12 units) - Grade of "C" or better is required			Course Name	Units	Completed	The following must be taken from the MATH ECON Core Concentration		
Course Name	Units	Completed	MATH009A	4				
ENGL001A	4		MATH009B	4		Course Name	Units	Grade
ENGL001B	4		MATH009C	4		MATH131	4	
ENGL001C	4		MATH031	5		MATH135A&B or 149A&B	8	
HUMANITIES (12 units minimum)			CS010A	4		MATH146A	4	
One (1) course from: World History 10, 15, or 20			MATH010A	4		MATH146B	4	
			MATH010B	4		MATH146C	4	
One (1) course in: fine arts, literature, philosophy, or religious studies			MATH046	4		ECON Option Area must take the following:		
			CS011 is recommended					
One (1) additional humanities course			Year of Science BIOL005, CHEM001, or PHYS040 Series			MATH120	4	
						MATH121	4	
SOCIAL SCIENCES (12 units minimum)						MATH149A	4	
One (1) course in: economics, political science						MATH149B	4	
						ECON 4 Upper-Div (at least 17-20		
One (1) course in: anthropology, psychology, sociology			Please refer to prerequisite requirements for all MATH courses.			ECON	5	
						ECON	5	
One (1) additional social sciences course						ECON	5	
			Please note: MATH144 is a prerequisite requirement for MATH145A and MATH150A (also requires MATH009C & MATH010B with C- or better). Plan accordingly.			ECON	4/5	
ETHNIC STUDIES (4 units minimum)						Please review course offerings for other ECON course availability, prerequisites, and appropriate course planning.		
May count towards addt'l humanities or addt'l social sciences, but not both								
BIOLOGICAL SCIENCES (4 units minimum)						In lieu of ECON102A, 102B, 103A, and 103B choices, either ECON102 or ECON104A may be taken		
			Refer to your university catalog year and degree audit for specific course listings and all major requirements.					
MATHEMATICS (4 units minimum)								
PHYSICAL SCIENCE (4 units minimum)								
Two additional 4-unit courses from life sciences or physical science								

Name:				
SID #:				

MATH APPLIED ENSC COURSEWORK
MATH Bachelor of Science (Fall 2022 & previous)

BREADTH REQUIREMENTS (180 units minimum to graduate, 216 max)			MATH Core Requirement Lower-Div Entire major GPA must completed with at least a 2.00 GPA			MATH ENSC Option Concentration Upper-Division Coursework
Common Breadth Courses			**Course Offerings**			**Course Offerings**

BREADTH REQUIREMENTS			Course Name	Units	Completed	MATH ENSC Concentration
English (12 units) - Grade of "C" or better is required			MATH009A	4		The following must be taken from the MATH ENSC Core Concentration
Course Name	Units	Completed	MATH009B	4		
ENGL001A	4		MATH009C	4		Course Name / Units / Grade
ENGL001B	4		MATH031	5		MATH131 — 4
ENGL001C	4		**CS010A**	4		MATH135A&B or 149A&B — 8
HUMANITIES (12 units minimum)			MATH010A	4		MATH146A — 4
One (1) course from: World History 10, 15, or 20			MATH010B	4		MATH146B — 4
			MATH046	4		MATH146C — 4
One (1) course in: fine arts, literature, philosophy, or religious studies			CS011 is recommended			ENSC MATH Upper-Division must take the following:
One (1) additional humanities course			Science Sequences for applied ENSC			MATH149A — 4
						ENSC MATH Upper-Division must take 2 of the following:
SOCIAL SCIENCES (12 units minimum)			CHEM001A/01LA	5		
One (1) course in: economics, political science			CHEM001B/01LB	5		MATH120 — 4
			CHEM001C/01LC	5		MATH121 — 4
One (1) course in: anthropology, psychology, sociology			Additional Lower-Div Sciences			MATH135A — 4
			ENSC006/ECON006*	4		MATH135B — 4
One (1) additional social sciences course			GEO001 (recommended)	4		MATH149B — 4
			Please note: MATH144 is a prerequsite requirement for MATH145A and MATH150A (also requires MATH009C & MATH010B with C- or better). Also review upper-div ENSC preqs. Plan accordingly.			CS177 — 4
ETHNIC STUDIES (4 units minimum)						STAT155 — 4
May count towards addt'l humanities or addt'l social sciences, but not both						**ENSC Upper-Div must take the**
						ENSC100/SWSC100 — 4
BIOLOGICAL SCIENCES (4 units minimum)						ENSC101 — 4
			Refer to your university catalog year and degree audit for specific course listings and all major requirements.			ENSC102 — 4
MATHEMATICS (4 units minimum)						Additional 4 units of upper-div ENSC
						4
PHYSICAL SCIENCE (4 units minimum)						Please review course offerings for course availability, prerequisites, and appropriate course planning. **PLEASE NOTE: ENSC002** is a prerequisite for ENSC upper-div. ***Substituion course available**
			UC RIVERSIDE — UNIVERSITY OF CALIFORNIA / CNAS Academic Advising Center			
Two additional 4-unit courses from life sciences or physical science						

Name:			MATH APPLIED PHYS COURSEWORK		
SID #:			MATH Bachelor of Science (Fall 2022 & previous)		

BREADTH REQUIREMENTS
(180 units minimum to graduate, 216 max)

[Common Breadth Courses]

MATH Core Requirement Lower-Div
Entire major GPA must completed with at least a 2.00 GPA

[Course Offerings]

MATH PHYS Option Concentration
Upper-Division Coursework

[Course Offerings]

BREADTH REQUIREMENTS			MATH Core Requirement Lower-Div			MATH PHYS Option Concentration		
English (12 units) - Grade of "C" or better is required			Course Name	Units	Completed	The following must be taken from the MATH PHYS Core Concentration		
Course Name	Units	Completed	MATH009A	4				
ENGL001A	4		MATH009B	4		Course Name	Units	Grade
ENGL001B	4		MATH009C	4		MATH131	4	
ENGL001C	4		MATH031	5		MATH135A&B or 149A&B	8	
HUMANITIES (12 units minimum)			**CS010A**	4		MATH146A	4	
One (1) course from: World History 10, 15, or 20			MATH010A	4		MATH146B	4	
			MATH010B	4		MATH146C	4	
One (1) course in: fine arts, literature, philosophy, or religious studies			MATH046	4		PHYS MATH Upper-Division must take the following:		
			CS011 is recommended					
One (1) additional humanities course			Recommended Science Sequence for applied PHYS			MATH135A	4	
						MATH165A	4	
SOCIAL SCIENCES (12 units minimum)			PHYS040A	5		Take 1 of the following:		
One (1) course in: economics, political science			PHYS040B	5		MATH120 or MATH171	4	
			PHYS040C	5		[PHYS Upper-Division must take the following:]		
One (1) course in: anthropology, psychology, sociology			Please refer to prerequisite requirements for all MATH & PHYS courses.			PHYS130A	4	
						PHYS130B	4	
One (1) additional social sciences course			Please note: MATH144 is a prerequisite requirement for MATH145A and MATH150A (also requires MATH009C & MATH010B with C- or better). Also review upper-div PHYS preqs. Plan accordingly.			Take 1 series of the following:		
						PHYS135A, 135B, 136	12	
ETHNIC STUDIES (4 units minimum)						OR		
May count towards addt'l humanities or addt'l social sciences, but not both						PHYS156A & 156B	8	
			Refer to your university catalog year and degree audit for specific course listings and all major requirements.			Please review course offerings for course availability, prerequisites, and appropriate course planning.		
BIOLOGICAL SCIENCES (4 units minimum)								
MATHEMATICS (4 units minimum)								
PHYSICAL SCIENCE (4 units minimum)								
Two additional 4-unit courses from life sciences or physical science								

Name:
SID #:

COMPUTATIONAL MATH COURSEWORK
MATH Bachelor of Science (Fall 2022 & previous)

BREADTH REQUIREMENTS
(180 units minimum to graduate, 216 max)

Common Breadth Courses

English (12 units) - Grade of "C" or better is required		
Course Name	Units	Completed
ENGL001A	4	
ENGL001B	4	
ENGL001C	4	
HUMANITIES (12 units minimum)		
One (1) course from: World History 10, 15, or 20		
One (1) course in: fine arts, literature, philosophy, or religious studies		
One (1) additional humanities course		
SOCIAL SCIENCES (12 units minimum)		
One (1) course in: economics, political science		
One (1) course in: anthropology, psychology, sociology		
One (1) additional social sciences course		
ETHNIC STUDIES (4 units minimum)		
May count towards addt'l humanities or addt'l social sciences, but not both		
BIOLOGICAL SCIENCES (4 units minimum)		
MATHEMATICS (4 units minimum)		
PHYSICAL SCIENCE (4 units minimum)		
Two additional 4-unit courses from life sciences or physical science		

MATH Core Requirement Lower-Div
Entire major GPA must completed with at least a 2.00 GPA

Course Offerings

Course Name	Units	Completed
MATH009A	4	
MATH009B	4	
MATH009C	4	
MATH031	5	
CS010A	4	
MATH010A	4	
MATH010B	4	
MATH046	4	
MATH/CS011	4	

Year of Science
BIOL005, CHEM001, or PHYS040 Series

Please refer to prerequisite requirements for all MATH courses.

Please note: MATH144 is a prerequisite requirement for MATH145A and MATH150A (also requires MATH009C & MATH010B with C- or better). Plan accordingly.

Refer to your university catalog year and degree audit for specific course listings and all major requirements.

UC RIVERSIDE — UNIVERSITY OF CALIFORNIA — CNAS Academic Advising Center

Computational MATH Concentration
Lower & Upper-Division Coursework

Course Offerings

The following must be taken from the MATH General Core Concentration

Course Name	Units	Grade
MATH131	4	
MATH120	4	
MATH132	4	
MATH135A	4	
MATH135B	4	

Computational MATH concentration must take the following:

Course Name	Units	Grade
CS010B	4	
CS010C	4	
CS141	4	
CS150	4	
One addt'l CS from techn elective		
CS	4	
16 units of techn elective chosen from		
CS111	4	
MATH121	4	
MATH126	4	
MATH146A	4	
MATH146B	4	
MATH146C	4	
MATH149A	4	
MATH149B	4	
MATH171	4	
CS130	4	
CS166	4	
CS170	4	
CS177	4	