Name:					
SID #:			**PURE MATH COURSEWORK** MATH Bachelor of Science (Fall 2016 or earlier catalogs)		

PURE MATH COURSEWORK
MATH Bachelor of Science (Fall 2016 or earlier catalogs)

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 (56 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)			**CS010**	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.			20 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)			Refer to your university catalog year and degree audit for specific course listings and all major requirements.					4
								4
MATHEMATICS (4 units minimum)								
PHYSICAL SCIENCE (4 units minimum)								
Two additional 4-unit courses from life sciences or physical science								

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GENERAL APPLIED MATH COURSEWORK
MATH Bachelor of Science (Fall 2016 or earlier catalogs)

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**

BREADTH REQUIREMENTS

Course Name	Units	Completed
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

Course Name	Units	Completed
MATH009A	4	
MATH009B	4	
MATH009C	4	
MATH031	5	
CS010	4	
MATH010A	4	
MATH010B	4	
MATH046	4	
CS011 is recommended		
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.

MATH General Applied Concentration

The following must be taken from the MATH General Core Concentration

Course Name	Units	Grade
MATH131	4	
MATH135A&B or 149A&B	8	
MATH146A	4	
MATH146B	4	
MATH146C	4	

General MATH Option Area must take the following:

Course Name	Units	Grade
MATH150A or MATH151A	4	
MATH168	4	
16 units from the following:		
MATH120	4	
MATH121	4	
MATH126	4	
MATH141	4	
MATH149A	4	
MATH149B	4	
MATH151B	4	
MATH165A	4	
MATH165B	4	

Please review course offerings for course availability and appropriate course planning.

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MATH APPLIED BIOL COURSEWORK
MATH Bachelor of Science (Fall 2016 or earlier catalogs)

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)			**CS010**	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
						3 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						**BIOL Upper-Division, must take:**
			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.			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						

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MATH APPLIED CHEM COURSEWORK
MATH Bachelor of Science (Fall 2016 or earlier catalogs)

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 CHEM 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 CHEM 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)			**CS010**	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 4 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 prerequisite 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
			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**			4
MATHEMATICS (4 units minimum)						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						

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MATH APPLIED ECON COURSEWORK
MATH Bachelor of Science (Fall 2016 or earlier catalogs)

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)			CS010	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
						MATH149C — 4
One (1) course in: anthropology, psychology, sociology			Please refer to prerequisite requirements for all MATH courses.			ECON 5 Upper-Division (at least 20 units)
						ECON — 4
One (1) additional social sciences course						ECON — 4
			Please note: MATH144 is a prerequisite requirement for MATH145A and MATH150A (also requires MATH009C & MATH010B with C- or better). Plan accordingly.			ECON — 4
ETHNIC STUDIES (4 units minimum)						ECON — 4
May count towards addt'l humanities or addt'l social sciences, but not both						ECON — 4
						Please review course offerings for course availability, prerequisites, and appropriate course planning.
BIOLOGICAL SCIENCES (4 units minimum)						
			Refer to your university catalog year and degree audit for specific course listings and all major requirements.			In lieu of ECON102A, 102B, 103A, and 103B choices, either ECON102 or ECON104A may be taken
MATHEMATICS (4 units minimum)						
PHYSICAL SCIENCE (4 units minimum)						
Two additional 4-unit courses from life sciences or physical science						

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MATH APPLIED ENSC COURSEWORK
MATH Bachelor of Science (Fall 2016 or earlier catalogs)

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**
English (12 units) - Grade of "C" or better is required			Course Name	Units	Completed	The following must be taken from the MATH ENSC 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)			**CS010**	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		ENSC MATH Upper-Division must take the following:
			CS011 is recommended			
One (1) additional humanities course			Science Sequences for applied ENSC			MATH149A — 4
			CHEM001A/01LA	5		ENSC MATH Upper-Division must take 3 of the following:
SOCIAL SCIENCES (12 units minimum)			CHEM001B/01LB	5		
One (1) course in: economics, political science			CHEM001C/01LC	5		MATH120 — 4
			Additional Lower-Div Sciences			MATH121 — 4
One (1) course in: anthropology, psychology, sociology			ENSC006/ECON006	4		MATH135A — 4
			GEO001 (recommended)	4		MATH135B — 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 ENSC preqs. Plan accordingly.			MATH149B — 4
						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 following:**
						ENSC100/SWSC100 — 4
BIOLOGICAL SCIENCES (4 units minimum)			Refer to your university catalog year and degree audit for specific course listings and all major requirements.			ENSC101 — 4
						ENSC102 — 4
MATHEMATICS (4 units minimum)						Additional 4 units of upper-div ENSC
						4
PHYSICAL SCIENCE (4 units minimum)			Review course offerings for availability, prerequisites, & appropriate course planning.			4
Two additional 4-unit courses from life sciences or physical science						
			PLEASE NOTE: ENSC002 is a prerequisite for ENSC upper-div.			UC RIVERSIDE — UNIVERSITY OF CALIFORNIA — CNAS Academic Advising Center

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MATH APPLIED PHYS COURSEWORK
MATH Bachelor of Science (Fall 2016 or earlier catalogs)

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 PHYS 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 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)				**CS010**	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		MATH165B	4	
One (1) course in: economics, political science				PHYS040B	5		Take 1 of the following:		
				PHYS040C	5		MATH120 or MATH171	4	
One (1) course in: anthropology, psychology, sociology				Please refer to prerequisite requirements for all MATH & PHYS courses.			PHYS Upper-Division must take the following:		
							PHYS130A	4	
One (1) additional social sciences course							PHYS130B	4	
				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:		
ETHNIC STUDIES (4 units minimum)							PHYS135A, 135B, 136	12	
May count towards addt'l humanities or addt'l social sciences, but not both							OR		
							PHYS156A & 156B	8	
BIOLOGICAL SCIENCES (4 units minimum)									
				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									

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MATH APPLIED STAT COURSEWORK
Bachelor of Science (Fall 2016 or earlier catalogs, NA for 2017 to current)

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 STAT 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 STAT 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)			**CS010**	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		**STAT Applied Option Area must take the following:**
			CS011 is recommended			
One (1) additional humanities course			Year of Science BIOL005, CHEM001, or PHYS040 Series			MATH120	4	
						STAT160A	4	
SOCIAL SCIENCES (12 units minimum)						STAT160B		
One (1) course in: economics, political science						STAT160C	4	
			Please refer to prerequisite requirements for all MATH & STAT courses.			Must take one of the following:
One (1) course in: anthropology, psychology, sociology						STAT130 or STAT146	4	
						Must take the following:
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). Plan accordingly.			STAT161	4	
						STAT170A	4	
ETHNIC STUDIES (4 units minimum)						STAT170B	4	
May count towards addt'l humanities or addt'l social sciences, but not both						STAT171	4	
BIOLOGICAL SCIENCES (4 units minimum)			Refer to your university catalog year and degree audit for specific course listings and all major requirements.			Please review course offerings for course availability and appropriate course planning. Most STAT courses are offered once a year.
MATHEMATICS (4 units minimum)						
PHYSICAL SCIENCE (4 units minimum)						
Two additional 4-unit courses from life sciences or physical science						

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COMPUTATIONAL MATH COURSEWORK
MATH Bachelor of Science (Fall 2016 or earlier catalogs)

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			Computational MATH Concentration — Lower & 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		MATH120	4	
HUMANITIES (12 units minimum)			**CS010**	4		MATH132	4	
One (1) course from: World History 10, 15, or 20			MATH010A	4		MATH135A	4	
			MATH010B	4		MATH135B	4	
One (1) course in: fine arts, literature, philosophy, or religious studies			MATH046	4		**Computational MATH concentration must take the following:**		
			MATH/CS011	4				
One (1) additional humanities course			Year of Science BIOL005, CHEM001, or PHYS040 Series			CS012	4	
						CS014	4	
SOCIAL SCIENCES (12 units minimum)						CS141	4	
One (1) course in: economics, political science						CS150	4	
						One addt'l CS from techn elective		
One (1) course in: anthropology, psychology, sociology			Please refer to prerequisite requirements for all MATH courses.			CS	4	
						24 units of techn elective chosen from		
One (1) additional social sciences course						CS111	4	
			Please note: MATH144 is a prerequisite requirement for MATH145A and MATH150A (also requires MATH009C & MATH010B with C- or better). Plan accordingly.			MATH121	4	
ETHNIC STUDIES (4 units minimum)						MATH126	4	
May count towards addt'l humanities or addt'l social sciences, but not both						MATH146A	4	
						MATH146B	4	
BIOLOGICAL SCIENCES (4 units minimum)						MATH146C	4	
			Refer to your university catalog year and degree audit for specific course listings and all major requirements.			MATH149A	4	
MATHEMATICS (4 units minimum)						MATH149B	4	
						MATH171	4	
PHYSICAL SCIENCE (4 units minimum)						CS130	4	
						CS166	4	
Two additional 4-unit courses from life sciences or physical science						CS170	4	
						CS177	4	

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