



Name:			PURE MATH COURSEWORK					
SID #:			MATH Bachelor of Science (Fall 2017 catalog 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 PURE MATHEMATICS Upper-Division Coursework (52 units)		
<u>Common Breadth Courses</u>			<u>Course Offerings</u>			<u>Course Offerings</u>		
English (12 units) - Grade of "C" or better is required			Course Name	Units	Completed	36 units of upper-div to include at least 24 units from the following:		
Course Name	Units	Completed	MATH009A	4		Course Name	Units	Grade
ENGL001A	4		MATH009B	4		MATH131	4	
ENGL001B	4		MATH009C	4		MATH132	4	
ENGL001C	4		MATH031	5		MATH145A	4	
HUMANITIES (12 units minimum)			CS010	4		MATH145B	4	
One (1) course from: World History 10, 15, or 20			MATH010A	4		MATH151A	4	
			MATH010B	4		MATH151B	4	
One (1) course in: fine arts, literature, philosophy, or religious studies			MATH046	4		MATH151C	4	
			CS011 is recommended			MATH171	4	
One (1) additional humanities course			Year of Science			MATH172	4	
			BIOL005, CHEM001, or PHYS040 Series			At least 3 courses from above must be:		
SOCIAL SCIENCES (12 units minimum)						MATH145A		
One (1) course in: economics, political science						MATH145B		
						MATH151A		
One (1) course in: anthropology, psychology, sociology			Please refer to prerequisite requirements for all MATH courses.			MATH151B		
			Please note: MATH144 is a prerequisite requirement for MATH145A and MATH150A (also requires MATH009C & MATH010B with C- or better). Plan accordingly.			MATH151C		
One (1) additional social sciences course						16 additional upper-div		
ETHNIC STUDIES (4 units minimum)			Refer to your university catalog year and degree audit for specific course listings and all major requirements.				4	
May count towards addt'l humanities or addt'l social sciences, but not both							4	
							4	
							4	
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:			GENERAL APPLIED MATH COURSEWORK							
SID #:			MATH Bachelor of Science (Fall 2017 catalog 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 General Applied Concentration Upper-Division Coursework				
<u>Common Breadth Courses</u>			<u>Course Offerings</u>			<u>Course Offerings</u>				
English (12 units) - Grade of "C" or better is required			Course Name			The following must be taken from the MATH General Core Concentration				
Course Name		Units	Completed	Units					Completed	
ENGL001A		4		MATH009A		4		Course Name		
ENGL001B		4		MATH009B		4				
ENGL001C		4		MATH009C		4		MATH131		
HUMANITIES (12 units minimum)				MATH031		5		MATH135A&B or 149A&B		
One (1) course from: World History 10, 15, or 20			CS010		4		MATH146A		4	
			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				MATH150A or MATH151A		4	
			BIOL005, CHEM001, or PHYS040 Series				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			Please note: MATH144 is a prerequisite requirement for MATH145A and MATH150A (also requires MATH009C & MATH010B with C- or better). Plan accordingly.				MATH149A		4	
							MATH149B		4	
ETHNIC STUDIES (4 units minimum)			Refer to your university catalog year and degree audit for specific course listings and all major requirements.				MATH151B		4	
May count towards addt'l humanities or addt'l social sciences, but not both							MATH165A		4	
			MATH165B		4		Please review course offerings for course availability 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:			MATH APPLIED BIOL COURSEWORK					
SID #:			MATH Bachelor of Science (Fall 2017 catalog 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 BIOL Option Concentration Upper-Division Coursework		
<u>Common Breadth Courses</u>			<u>Course Offerings</u>			<u>Course Offerings</u>		
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		Course Name	Units	Grade
ENGL001A	4		MATH009B	4		MATH131	4	
ENGL001B	4		MATH009C	4		MATH135A&B or 149A&B	8	
ENGL001C	4		MATH031	5		MATH146A	4	
HUMANITIES (12 units minimum)			CS010	4		MATH146B	4	
One (1) course from: World History 10, 15, or 20			MATH010A	4		MATH146C	4	
			MATH010B	4		BIOL Option Area must take the following:		
One (1) course in: fine arts, literature, philosophy, or religious studies			MATH046	4		MATH149A		
			CS011 is recommended			2 courses from the following:		
One (1) additional humanities course			Year of Science			MATH120		
SOCIAL SCIENCES (12 units minimum)			BIOL005A/05LA	5		MATH121		
One (1) course in: economics, political science			BIOL005B	4		MATH135A		
			BIOL005C	4		MATH135B		
One (1) course in: anthropology, psychology, sociology			Please refer to prerequisite requirements for all MATH courses.			MATH149B		
			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:		
One (1) additional social sciences course			Refer to your university catalog year and degree audit for specific course listings and all major requirements.			BIOL102		
ETHNIC STUDIES (4 units minimum)						BIOL105		
May count towards addt'l humanities or addt'l social sciences, but not both						BIOL108		
BIOLOGICAL SCIENCES (4 units minimum)						4 additional units of upper-division BIOL		
						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								



Name:			MATH APPLIED CHEM COURSEWORK											
SID #:			MATH Bachelor of Science (Fall 2017 catalog 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 CHEM Option Concentration Upper-Division Coursework								
<u>Common Breadth Courses</u>			<u>Course Offerings</u>			<u>Course Offerings</u>								
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		Course Name	Units	Grade						
ENGL001A	4		MATH009B	4		MATH131	4							
ENGL001B	4		MATH009C	4		MATH135A&B or 149A&B	8							
ENGL001C	4		MATH031	5		MATH146A	4							
HUMANITIES (12 units minimum)			CS010	4		MATH146B	4							
One (1) course from: World History 10, 15, or 20			MATH010A	4		MATH146C	4							
			MATH010B	4		CHEM Option Area must take 3 from the following:								
One (1) course in: fine arts, literature, philosophy, or religious studies			MATH046	4										
			CS011 is recommended			MATH120	4							
One (1) additional humanities course			Science Sequences for applied CHEM			MATH135A	4							
			CHEM001A/01LA	5		MATH135B	4							
SOCIAL SCIENCES (12 units minimum)			CHEM001B/01LB	5		MATH149A	4							
One (1) course in: economics, political science			CHEM001C/01LC	5		MATH149B	4							
			PHYS040A	5		MATH165A	4							
One (1) course in: anthropology, psychology, sociology			PHYS040B	5		MATH165B	4							
			PHYS040C	5		<u>CHEM Upper-Division, must take:</u>								
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 CHEM preqs. Plan accordingly.			CHEM110A	4							
ETHNIC STUDIES (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			CHEM110B	4				
May count towards addt'l humanities or addt'l social sciences, but not both									Additional 4 units of upper-div CHEM			CHEM111	4	
												CHEM113	4	
BIOLOGICAL SCIENCES (4 units minimum)			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														

Name:
SID #:

MATH APPLIED ECON COURSEWORK
MATH Bachelor of Science (Fall 2017 catalog 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 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
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 add'l humanities or add'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		

Course Name	Units	Completed
MATH009A	4	
MATH009B	4	
MATH009C	4	
MATH031	5	
<u>CS010</u>	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.		

The following must be taken from the MATH ECON Core Concentration		
Course Name	Units	Grade
MATH131	4	
MATH135A&B or 149A&B	8	
MATH146A	4	
MATH146B	4	
MATH146C	4	
ECON Option Area must take the following:		
MATH120	4	
MATH121	4	
MATH149A	4	
MATH149B	4	
<u>ECON 4 Upper-Div (at least 16 units)</u>		
ECON	4	
ECON	4	
ECON	4	
ECON	4	
Please review course offerings for other ECON course availability, prerequisites, and appropriate course planning.		
In lieu of ECON102A, 102B, 103A, and 103B choices, either ECON102 or ECON104A may be taken		



Name:			MATH APPLIED ENSC COURSEWORK					
SID #:			MATH Bachelor of Science (Fall 2017 catalog 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 ENSC Option Concentration Upper-Division Coursework		
<u>Common Breadth Courses</u>			<u>Course Offerings</u>			<u>Course Offerings</u>		
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		Course Name	Units	Grade
ENGL001A	4		MATH009B	4		MATH131	4	
ENGL001B	4		MATH009C	4		MATH135A&B or 149A&B	8	
ENGL001C	4		MATH031	5		MATH146A	4	
HUMANITIES (12 units minimum)			CS010	4		MATH146B	4	
One (1) course from: World History 10, 15, or 20			MATH010A	4		MATH146C	4	
			MATH010B	4		ENSC MATH Upper-Division must take the following:		
One (1) course in: fine arts, literature, philosophy, or religious studies			MATH046	4		MATH149A		
			CS011 is recommended			4		
One (1) additional humanities course			Science Sequences for applied ENSC			ENSC MATH Upper-Division must take 2 of the following:		
SOCIAL SCIENCES (12 units minimum)			CHEM001A/01LA	5		MATH120	4	
One (1) course in: economics, political science			CHEM001B/01LB	5		MATH121	4	
			CHEM001C/01LC	5		MATH135A	4	
One (1) course in: anthropology, psychology, sociology			Additional Lower-Div Sciences			MATH135B	4	
			ENSC006/ECON006	4		MATH149B	4	
One (1) additional social sciences course			GEO001 (recommended)	4		CS177	4	
ETHNIC STUDIES (4 units minimum)			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.			STAT155	4	
May count towards add'l humanities or add'l social sciences, but not both			Refer to your university catalog year and degree audit for specific course listings and all major requirements.			ENSC Upper-Div must take the following:		
BIOLOGICAL SCIENCES (4 units minimum)						ENSC100/SWSC100	4	
						ENSC101	4	
MATHEMATICS (4 units minimum)						ENSC102	4	
						Additional 4 units of upper-div ENSC		
PHYSICAL SCIENCE (4 units minimum)						4		
						Please review course offerings for course availability, prerequisites, and appropriate course planning. PLEASE NOTE:		
Two additional 4-unit courses from life sciences or physical science						ENSC002 is a prerequisite for ENSC upper-div.		



Name:
SID #:

MATH APPLIED PHYS COURSEWORK
MATH Bachelor of Science (Fall 2017 catalog 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 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
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 add'l humanities or add'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		

Course Name	Units	Completed
MATH009A	4	
MATH009B	4	
MATH009C	4	
MATH031	5	
<u>CS010</u>	4	
MATH010A	4	
MATH010B	4	
MATH046	4	
CS011 is recommended		
Recommended Science Sequence for applied PHYS		
<u>PHYS040A</u>	5	
PHYS040B	5	
PHYS040C	5	
Please refer to prerequisite requirements for all MATH & PHYS courses.		
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.		
Refer to your university catalog year and degree audit for specific course listings and all major requirements.		

The following must be taken from the MATH PHYS Core Concentration		
Course Name	Units	Grade
MATH131	4	
MATH135A&B or 149A&B	8	
MATH146A	4	
MATH146B	4	
MATH146C	4	
PHYS MATH Upper-Division must take the following:		
MATH135A	4	
MATH165A	4	
Take 1 of the following:		
MATH120 or MATH171	4	
PHYS Upper-Division must take the following:		
PHYS130A	4	
PHYS130B	4	
Take 1 series of the following:		
PHYS135A, 135B, 136	12	
OR		
PHYS156A & 156B	8	
Please review course offerings for course availability, prerequisites, and appropriate course planning.		



Name:			COMPUTATIONAL MATH COURSEWORK					
SID #:			MATH Bachelor of Science (Fall 2017 catalog 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			Computational MATH Concentration Lower & Upper-Division Coursework		
<u>Common Breadth Courses</u>			<u>Course Offerings</u>			<u>Course Offerings</u>		
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		Course Name	Units	Grade
ENGL001A	4		MATH009B	4		MATH131	4	
ENGL001B	4		MATH009C	4		MATH120	4	
ENGL001C	4		MATH031	5		MATH132	4	
HUMANITIES (12 units minimum)			<u>CS010</u>	4		MATH135A	4	
One (1) course from: World History 10, 15, or 20			MATH010A	4		MATH135B	4	
			MATH010B	4		Computational MATH concentration must take the following:		
One (1) course in: fine arts, literature, philosophy, or religious studies			MATH046	4		CS012	4	
			MATH/CS011	4		CS014	4	
One (1) additional humanities course			Year of Science BIOL005, CHEM001, or PHYS040 Series			CS141	4	
						CS150	4	
SOCIAL SCIENCES (12 units minimum)						One add'l CS from techn elective		
One (1) course in: economics, political science						CS	4	
						16 units of techn elective chosen from		
One (1) course in: anthropology, psychology, sociology			Please refer to prerequisite requirements for all MATH courses.			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	
One (1) additional social sciences course			Refer to your university catalog year and degree audit for specific course listings and all major requirements.			MATH126	4	
						MATH146A	4	
ETHNIC STUDIES (4 units minimum)						MATH146B	4	
May count towards add'l humanities or add'l social sciences, but not both						MATH146C	4	
						MATH149A	4	
BIOLOGICAL SCIENCES (4 units minimum)						MATH149B	4	
						MATH171	4	
MATHEMATICS (4 units minimum)						CS130	4	
						CS166	4	
PHYSICAL SCIENCE (4 units minimum)						CS170	4	
						CS177	4	
Two additional 4-unit courses from life sciences or physical science								

