

Name:			<b>PURE MATH COURSEWORK</b>					
SID #:			MATH Bachelor of Science (Fall 2017 catalog to current)					
<b>BREADTH REQUIREMENTS</b> (180 units minimum to graduate, 216 max)			<b>MATH Core Requirement Lower-Div</b> Entire major GPA must completed with at least a 2.00 GPA			<b>MATH PURE MATHEMATICS</b> 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			<b>Course Name</b>	<b>Units</b>	<b>Completed</b>	36 units of upper-div to include at least 24 units from the following:		
Course Name	Units	Completed	MATH009A	4		<b>Course Name</b>	<b>Units</b>	<b>Grade</b>
ENGL001A	4		MATH009B	4		MATH131	4	
ENGL001B	4		MATH009C	4		MATH132	4	
ENGL001C	4		MATH031	5		MATH145A	4	
HUMANITIES (12 units minimum)			<b>CS010</b>	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			Refer to your university catalog year and degree audit for specific course listings and all major requirements.			16 additional upper-div		
							4	
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	
MATHEMATICS (4 units minimum)								
PHYSICAL SCIENCE ( 4 units minimum)								
Two additional 4-unit courses from life sciences or physical science								



Name:			<b>GENERAL APPLIED MATH COURSEWORK</b>							
SID #:			MATH Bachelor of Science (Fall 2017 catalog to current)							
<b>BREADTH REQUIREMENTS</b> (180 units minimum to graduate, 216 max)			<b>MATH Core Requirement Lower-Div</b> Entire major GPA must completed with at least a 2.00 GPA			<b>MATH General Applied Concentration</b> 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			<b>Course Name</b>			The following must be taken from the MATH General Core Concentration				
Course Name		Units	Completed	Units					Completed	
ENGL001A		4		MATH009A		4		<b>Course Name</b>		
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			<u>CS010</u>		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:			<b>MATH APPLIED BIOL COURSEWORK</b>					
SID #:			MATH Bachelor of Science (Fall 2017 catalog to current)					
<b>BREADTH REQUIREMENTS</b> (180 units minimum to graduate, 216 max)			<b>MATH Core Requirement Lower-Div</b> Entire major GPA must completed with at least a 2.00 GPA			<b>MATH BIOL Option Concentration</b> 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			<b>Course Name</b>	<b>Units</b>	<b>Completed</b>	The following must be taken from the MATH BIOL Core Concentration		
Course Name	Units	Completed	MATH009A	4		<b>Course Name</b>	<b>Units</b>	<b>Grade</b>
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)			<b>CS010</b>	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	4	
			CS011 is recommended			2 courses from the following:		
One (1) additional humanities course			Year of Science			MATH120	4	
SOCIAL SCIENCES (12 units minimum)			BIOL005A/05LA	5		MATH121	4	
One (1) course in: economics, political science			BIOL005B	4		MATH135A	4	
			BIOL005C	4		MATH135B	4	
One (1) course in: anthropology, psychology, sociology			Please refer to prerequisite requirements for all MATH courses.			MATH149B	4	
			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.			<b>BIOL Upper-Division, must take:</b>		
One (1) additional social sciences course			Refer to your university catalog year and degree audit for specific course listings and all major requirements.			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	
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:			<b>MATH APPLIED CHEM COURSEWORK</b>														
SID #:			MATH Bachelor of Science (Fall 2017 catalog to current)														
<b>BREADTH REQUIREMENTS</b> (180 units minimum to graduate, 216 max)			<b>MATH Core Requirement Lower-Div</b> Entire major GPA must completed with at least a 2.00 GPA			<b>MATH CHEM Option Concentration</b> 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			<b>Course Name</b>	<b>Units</b>	<b>Completed</b>	The following must be taken from the MATH CHEM Core Concentration											
Course Name	Units	Completed	MATH009A	4		<b>Course Name</b>	<b>Units</b>	<b>Grade</b>									
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)			<b>CS010</b>	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		<b><u>CHEM Upper-Division, must take:</u></b>											
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. <b>Be aware potential time conflicts between CHEM110 and MATH146 series</b>			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				
BIOLOGICAL SCIENCES (4 units minimum)												Please review course offerings for course availability, prerequisites, and appropriate course planning.			CHEM113	4	
MATHEMATICS (4 units minimum)															Additional 4 units of upper-div CHEM		
PHYSICAL SCIENCE ( 4 units minimum)			Additional 4 units of upper-div CHEM			4											
Two additional 4-unit courses from life sciences or physical science						Additional 4 units of upper-div CHEM			4								
			Additional 4 units of upper-div CHEM						4								
						Additional 4 units of upper-div CHEM			4								

Name:			<b>MATH APPLIED ECON COURSEWORK</b>								
SID #:			MATH Bachelor of Science (Fall 2017 catalog to current)								
<b>BREADTH REQUIREMENTS</b> (180 units minimum to graduate, 216 max)			<b>MATH Core Requirement Lower-Div</b> Entire major GPA must completed with at least a 2.00 GPA			<b>MATH ECON Option Concentration</b> 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			<b>Course Name</b>			The following must be taken from the MATH ECON Core Concentration					
Course Name			<b>Units</b>						<b>Completed</b>		
ENGL001A			4			MATH009A			<b>Course Name</b>		
ENGL001B			4			MATH009B			MATH131		
ENGL001C			4			MATH009C			MATH135A&B or 149A&B		
HUMANITIES (12 units minimum)			<u>CS010</u>			MATH031			MATH146A		
One (1) course from: World History 10, 15, or 20			MATH010A			4			MATH146B		
			MATH010B			4			MATH146C		
One (1) course in: fine arts, literature, philosophy, or religious studies			MATH046			4			ECON Option Area must take the following:		
			CS011 is recommended			MATH120					
One (1) additional humanities course			Year of Science			MATH121			4		
			BIOL005, CHEM001, or PHYS040 Series			MATH149A			4		
SOCIAL SCIENCES (12 units minimum)						MATH149B			4		
One (1) course in: economics, political science						<u>ECON 4 Upper-Div (at least 20 units)</u>			ECON		
									5		
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			Please note: MATH144 is a prerequisite requirement for MATH145A and MATH150A (also requires MATH009C & MATH010B with C- or better). Plan accordingly.			ECON			5		
						ECON			5		
ETHNIC STUDIES (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 other ECON course availability, prerequisites, and appropriate course planning.					
May count towards add'l humanities or add'l social sciences, but not both						In lieu of ECON102A, 102B, 103A, and 103B choices, either ECON102 or ECON104A may be taken					
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:			<b>MATH APPLIED ENSC COURSEWORK</b>					
SID #:			MATH Bachelor of Science (Fall 2017 catalog to current)					
<b>BREADTH REQUIREMENTS</b> (180 units minimum to graduate, 216 max)			<b>MATH Core Requirement Lower-Div</b> Entire major GPA must completed with at least a 2.00 GPA			<b>MATH ENSC Option Concentration</b> 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			<b>Course Name</b>	<b>Units</b>	<b>Completed</b>	The following must be taken from the MATH ENSC Core Concentration		
Course Name	Units	Completed	MATH009A	4		<b>Course Name</b>	<b>Units</b>	<b>Grade</b>
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)			<b>CS010</b>	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						ENSC Upper-Div must take the		
BIOLOGICAL SCIENCES (4 units minimum)			Refer to your university catalog year and degree audit for specific course listings and all major requirements.			ENSC100/SWSC100	4	
						ENSC101	4	
MATHEMATICS (4 units minimum)			 			ENSC102	4	
PHYSICAL SCIENCE ( 4 units minimum)						Additional 4 units of upper-div ENSC		
			 			Please review course offerings for course availability, prerequisites, and appropriate course planning. <b>PLEASE NOTE:</b>		
Two additional 4-unit courses from life sciences or physical science						ENSC002 is a prerequisite for ENSC upper-div.		

Name:			<b>MATH APPLIED PHYS COURSEWORK</b>					
SID #:			MATH Bachelor of Science (Fall 2017 catalog to current)					
<b>BREADTH REQUIREMENTS</b> (180 units minimum to graduate, 216 max)			<b>MATH Core Requirement Lower-Div</b> Entire major GPA must completed with at least a 2.00 GPA			<b>MATH PHYS Option Concentration</b> 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			<b>Course Name</b>	<b>Units</b>	<b>Completed</b>	The following must be taken from the MATH PHYS Core Concentration		
Course Name	Units	Completed	MATH009A	4		<b>Course Name</b>	<b>Units</b>	<b>Grade</b>
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)			<u>CS010</u>	4		MATH146B	4	
One (1) course from: World History 10, 15, or 20			MATH010A	4		MATH146C	4	
			MATH010B	4		PHYS MATH Upper-Division must take the following:		
One (1) course in: fine arts, literature, philosophy, or religious studies			MATH046	4		MATH135A		
			CS011 is recommended			MATH165A		
One (1) additional humanities course			Recommended Science Sequence for applied PHYS			MATH120 or MATH171		
			<u>PHYS040A</u>	5		Take 1 of the following:		
SOCIAL SCIENCES (12 units minimum)			PHYS040B	5		PHYS Upper-Division must take the following:		
One (1) course in: economics, political science			PHYS040C	5		PHYS130A		
			Please refer to prerequisite requirements for all MATH & PHYS courses.			PHYS130B		
One (1) course in: anthropology, psychology, sociology			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:		
			Refer to your university catalog year and degree audit for specific course listings and all major requirements.			PHYS135A, 135B, 136		
One (1) additional social sciences course						OR		
ETHNIC STUDIES (4 units minimum)						PHYS156A & 156B		
May count towards add'l humanities or add'l social sciences, but not both						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:			<b>COMPUTATIONAL MATH COURSEWORK</b>						
SID #:			MATH Bachelor of Science (Fall 2017 catalog to current)						
<b>BREADTH REQUIREMENTS</b> (180 units minimum to graduate, 216 max)			<b>MATH Core Requirement Lower-Div</b> Entire major GPA must completed with at least a 2.00 GPA			<b>Computational MATH Concentration</b> 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			<b>Course Name</b>		<b>Units</b>	<b>Completed</b>	The following must be taken from the MATH General Core Concentration		
Course Name	Units	Completed	MATH009A	4					
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			<b>Computational MATH concentration must take the following:</b>		
One (1) course in: fine arts, literature, philosophy, or religious studies			MATH046	4					
			MATH/CS011	4			CS012	4	
One (1) additional humanities course			Year of Science				CS014	4	
			BIOL005, CHEM001, or PHYS040 Series				CS141	4	
SOCIAL SCIENCES (12 units minimum)							CS150	4	
One (1) course in: economics, political science							One add'l CS from techn elective		
							CS	4	
One (1) course in: anthropology, psychology, sociology			Please refer to prerequisite requirements for all MATH courses.				16 units of techn elective chosen from		
									CS111
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.				MATH121	4	
									MATH126
ETHNIC STUDIES (4 units minimum)			Refer to your university catalog year and degree audit for specific course listings and all major requirements.				MATH146A	4	
May count towards add'tl humanities or add'tl social sciences, but not both									MATH146B
BIOLOGICAL SCIENCES (4 units minimum)						MATH146C	4		
						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		

