STEM Program
Kapi'olani Community College

Newsflash

Check out the KCC STEM facebook group at www.facebook.com/kccstem. Please join the group if you are a STEM student or if you are simply interested in the STEM Program. This group will be used to announce STEM events, as well as to share pictures from these events.

Main Menu

Programs
STEM Students
The Summer Bridge
Undergraduate Research
STEM Grants
Coordinators
Make a Gift
In the News
Testimonials
Gallery
Videos
Web Links
Visit the KCC Homepage
Share

KCC STEM Photographs

Polls

What is the best way to inform you about STEM events?

- This websites events page
- This websites calendar
- Email
- Facebook
- Twitter
- Other

Vote Results

Associate in Science in Natural Science Degree

The purpose of the A.S. degree is to provide a clear, explicit, and coherent pathway for students intending to transfer into STEM majors at baccalaureate institutions. The A.S. degree provides targeted advising and appropriate course sequencing for efficient transfer of our STEM students. The degree also provides a focus for the College to identify, recruit, counsel, and retain STEM students. The degree marks the endpoint for students who have moved through the curricular pathways. The degree facilitates articulation and transfer agreements between Kapi'olani Community College and four-year STEM programs at UH Manoa (UHM), UH Hilo (UHH), as well as programs on the U.S. mainland.

Below are links to several useful downloadable forms related to the ASNS degree:

- Info Sheet PDF - Breakdown of courses for both the Physical Science and the Life Science tracks
- Checklist PDF - Fillable form that can be used to track courses and credits
- Change of Major form PDF - For changing majors

Stem students working in a lo'i patch

The A.S. in Natural Science degree reinforces and deepens STEM learning across the curriculum, supports and strengthens the STEM infrastructure of the University, and allows Kapi'olani Community College to become a salient incubator of science talent. By enhancing the STEM curriculum through various pathways and offering a focused degree program, more of the College's students will pursue STEM majors and successfully complete their degrees. Early introduction of STEM-oriented 2nd-year courses allows students to experience their chosen discipline beyond the survey-

course level and it also allows the students to determine if the STEM Program is the correct educational direction for them. In addition, by introducing the courses at an earlier point in the student's college career, both the college and the student are able to assess whether or not he/she has the talent and skills needed to succeed in the STEM Program. The A.S. degree complements Kapi'olani Community College's mission on several levels. First, the degree provides open access to all students. Second, the degree promotes student progress, learning, and success while maintaining a low level of tuition and a high level of quality in the college's instructional programs. Third, the A.S. degree fosters student development and enhances support services offered to students. Fourth, the degree helps to prepare students to meet rigorous baccalaureate requirements and personal enrichment goals by offering a high quality liberal arts program. Fifth, the degree utilizes human, physical, technological, and financial resources effectively and efficiently to achieve ambitious educational goals.

Although students are traditionally taught to enroll in primarily core general-education courses when they first enter college, it is extremely important to expose them to first- and second-year STEM courses early in their college careers. Early exposure to STEM courses also allows STEM students to have access to STEM content that is vital to the success of their early research experiences, to broaden their third and fourth years of college to include liberal arts courses, and to have a more manageable third and fourth year class schedule.

The A.S. degree program in Natural Science with a concentration in Life Science or Physical Science includes a core curriculum for all students in the program, as well as additional specific courses for two areas of concentration: Life Science transfer and Physical Science transfer. The shared and specialized curricula are reflected in the tables below.

A.S. Degree in Natural Science with a concentration in Life Science or Physical Science

(Total credits: 60 credits)

Shared Curriculum

General Education Courses		Title	CR	1	2	3	4
Foundation	FW ENG100	Composition I	3	*			
Foundation	FS MATH205	Calculus I	4	*			
Foundation	FG Group A, B, or C	FG 2 courses from 2 groups A, B, C	6			*	*
Diversification	DA, DL, DH	1 course from DA, DL, DH	3	*			
Diversification	DB, DP*	1 course from DB or DP	3		*		
Diversification	DS	1 course from DS	3			*	
Note: The above schedule assumes that two Writing-Intensive courses and one HAP course are taken as diversification courses. *LS concentration students need to take one DP that may also be part of the required or elective courses for the degree. **Total Number of Shared General Education Credits**			**22**				

FW = Foundations Writing

FS = Foundations Symbolic Reasoning

FG = Foundations Global/Multicultural Issues; Courses are in three groups, A, B and C

DA = Diversification Arts

DL = Diversification Literature

DH = Diversification Humanities

DB = Diversification Biological Sciences

DP = Diversification Physical Sciences

DS = Diversification Social Sciences

Shared Program Courses

Common to the A.S. with a concentration in Life Science or Physical Science

Alpha #	Title	CR	1	2	3	4
CHEM 161	General Chemistry I	3	*			
CHEM 161 L	General Chemistry I Lab	1	*			
CHEM 162	General Chemistry II	3		*		
CHEM 162 L	General Chemistry II Lab	1		*		
ICS 101	Tools for the Information Age	3	*			
	Total Shared Program Credits	**11**				

COURSES REQUIRED for Concentration in LS

BIOL 171	General Biology I	3		*		
BIOL 171 L	General Biology I Lab	1		*		
BIOL 172	General Biology II	3			*	
BIOL 172 L	General Biology II Lab	1			*	
	Total Credits Required for Concentration in LS	**8**				

COURSES REQUIRED for Concentration in PS

MATH 206	Calculus II	4		*		
PHYS 170	Physics I	4		*		
PHYS 170 L	Physics I Lab	1		*		
PHYS 272	Physics II	3			*	
PHYS 272 L	Physics II Lab	1			*	
	Total Credits Required for Concentration in PS	**13**				

ELECTIVE COURSES for Both Concentrations (for 60 credit degree, LS=19 credits of electives; PS=14 credits of electives) *Strongly Recommended for A.S. in Natural Science with a concentration in LS or PS LS =Strongly Recommended for A.S. LS PS =Strongly Recommended for A.S. PS			
ASTR 280 (3)	Evolution of the Universe	ICS 212 (3)	Program Structure
BIOC 241 (3)	Fundamentals of Biochemistry	ICS 241 (3)	Discreet Mathematics for Computer Science II
BIOC 244 (3)	Essentials of Biochemistry	MATH 206 (4)	Calculus II*
BIOL 171 (3)	General Biology I	MATH 206 L (1)	Calculus II Lab
BIOL 171 L (1)	General Biology I Lab	MATH 231 (4)	Calculus III PS
BIOL 172 (3)	General Biology II	MATH 232 (4)	Calculus IV PS
BIOL 172 L (1)	General Biology II Lab	MICR 130 (3)	General Microbiology
BIOL 275 (3)	Cell and Molecular Biology LS	MICR 140 (2)	General Microbiology Lab
BIOL 275 L (2)	Cell and Molecular Biology Lab LS	MICR 161 (2)	Immunology and Protein Chemistry
CHEM 272 (3)	Organic Chemistry I LS	MICR 230 (3)	Molecular Biology
CHEM 272 L (1)	Organic Chemistry I Lab LS	MICR 240 (2)	Cell Biology and Tissue Culture
CHEM 273 (3)	Organic Chemistry II LS	OCEAN 201 (3)	Science of the Sea
CHEM 273 L (1)	Organic Chemistry II Lab LS	PHYS 151 (3)	College Physics I
CE 113 (3)	Introduction to Computer and Design	PHYS 151 L (1)	College Physics I Lab
CE 270 (3)	Applied Mechanics I	PHYS 152 (3)	College Physics II
CE 271 (3)	Applied Mechanics II	PHYS 152 L (1)	College Physics II Lab
EE 160 (4)	Programming for Engineers PS	PHYS 170 (4)	General Physics I
EE 211 (4)	Basic Circuit Analysis	PHYS 170 L (1)	General Physics I Lab
EE 260 (4)	Introduction to Digital Design	PHYS 272 (3)	General Physics II

ESS 254 (2)	Physiological Basis for Exercise	PHYS 272 L (1)	General Physics II Lab
ESS 254 L (1)	Physiological Basis for Exercise Lab	PHYS 274 (3)	General Physics III PS
ESS 263 (3)	Sport Biomechanics	PHYL 160 (3)	The Science of Sleep
ESS 288 (1)	Body Composition and Weight Management	ZOOL 141 (3)	Human Anatomy and Physiology I
GEOL 101 L (1)	Introduction to Physical Geology Lab	ZOOL 141 L (1)	Human Anatomy and Physiology I Lab
GEOL 103 (3)	Geology of the Hawaiian Islands	ZOOL 142 (3)	Human Anatomy and Physiology II
ICS 111 (3)	Introduction to Computer Science I	ZOOL 142 L (1)	Human Anatomy and Physiology II Lab
ICS 141 (3)	Discreet Mathematics for Computer Science I	ZOOL 200 (2)	Marine Biology
ICS 211 (3)	Introduction to Computer Science II	ZOOL 200 L (1)	Marine Biology Lab

SAMPLE Elective Choices

for STEM KCC Pathways

These Kapiʻolani Community College Elective Courses are unique

to various STEM Programs at UHM and UHH

Life Science ***WAIKIKI WATERSHED ECOLOGY***	***CR***	***Life Science*** ***BIOTECHNOLOGY & MOLECULAR SCIENCE***	***CR***	***Life Science*** ***PHYSIOLOGY & EXERCISE SCIENCE***	***CR***	***Physical Science*** ***ENGINEERING & SPACE SCIENCE***	***CR***
BIOL 275 + LAB	5	MICRO 130/140	5	BIOL 130 OR ZOOL 141/142 + LABS	3 OR 8	PHYS 274	3
ZOOL 200 + LAB OR	3	MICRO 161/230	5	BIOC 241	4	EE 160	4

OCN 201							
CHEM 272 + LAB	4	BIOL 275 + LAB	5	FSHE 185	3	CE 270 OR ASTR 280	3
BOT 130 + Lab OR GG 103	4 OR 3	CHEM 272 + LAB	4	ESS 254 OR ESS 280 OR PHYL 160	3	EE 211	4