UH STEM Pathways Project

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Strategic Directions, 2015-2021
http://www.hawaii.edu/strategicdirections/

• Hawai‘i Graduation Initiative
• Hawai‘i Innovation Initiative
• 21st Century Facilities
• High Performance Mission-Driven System
GOAL: Increase the educational capital of the state by increasing the participation and completion of students, particularly Native Hawaiians, low-income students and those from underserved regions and population sand preparing them for success in the workforce and their communities.
HGI Action Strategy 1: Strengthen the pipeline from K-12 to the university to improve college readiness and increase college attendance.

TACTIC:

• Institutionalize early college and “bridge” programs
HGI Action Strategy 2: Implement structural improvements that promote persistence to attain a degree and timely completion.

TACTIC:

• Establish pathways for all degree programs, including transfer pathways from the community colleges.
HGI Action Strategy 3: Anticipate and align curricula with community and workforce needs.

TACTIC:

- Develop new programs that are responsive to community needs, e.g., STEM, data science, sustainability sciences and cybersecurity
The BIG Picture

GRADUATE SCHOOL

STEM MAJORS

Transfer Bridge

A.S. Degrees

ASNS

A.A. Degrees

UHCC Gen Ed

Workforce

Higher Ed

Transition Bridge

Hawai‘i DOE STEM
Objective of the ASNS

Prepare students to transfer to baccalaureate STEM programs with a recognized and supported pathway.

ASNS courses will fulfill STEM program requirements at 4-year institutions and provide an easier pathway into STEM.
Proposed ASNS Concentrated Pathways

- Biological Science
- Data Science
- Engineering
- Physical Science
# UHCC ASNS Concentration
## Course Requirements

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<th>UHCC ASNS</th>
<th>Credits</th>
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| **BIOLOGICAL SCIENCE**     |         | ENG 100 (FW) | FG1 (WI) | FG2 (WI) | DH (HAP) | DS (WI) | MATH 205 (FS) | CHEM 161/L CHEM 162/L (DP, DY) | BIOL 171/L BIOL 172/L (DB) | BIO 265/L OR BIOL 275/L | BIOLOGICAL SCIENCE ELECTIVES | TOTAL | REQUIRED COURSES FOR TRANSFER: NONE  
GRADUATION REQUIREMENTS: (2) WI AND (1) HAP AND 2.0 GPA |
| **DATA SCIENCE**           |         | ENG 100 (FW) | FG1 (WI) | FG2 (WI) | DH (HAP) | DS (WI) | MATH 205 (FS) | CHEM 161/L CHEM 162/L (DP, DY) | DB | PHYS 151/L | DATA SCIENCE ELECTIVES | TOTAL | REQUIRED COURSES FOR TRANSFER: ICS 111, 141, 211, 212, 241  
GRADUATION REQUIREMENTS: (2) WI AND (1) HAP AND 2.0 GPA |
| **ENGINEERING**            |         | ENG 100 (FW) | FG1 (WI) | FG2 (WI) | DH (HAP) | DS (ECON 130) (WI) | MATH 205 (FS) | CHEM 161/L CHEM 162/L (DP, DY) | DB | PHYS 170/L PHYS 272/L | ENGINEERING ELECTIVES | TOTAL | REQUIRED COURSES FOR TRANSFER: MATH 206, 231, 232; EE 160; CE 270 OR EE 211  
GRADUATION REQUIREMENTS: (2) WI AND (1) HAP AND 2.0 GPA |
| **PHYSICAL SCIENCE**       |         | ENG 100 (FW) | FG1 (WI) | FG2 (WI) | DH (HAP) | DS (WI) | MATH 205 (FS) | CHEM 161/L CHEM 162/L (DP, DY) | DB | PHYS 170/L PHYS 272/L | PHYSICAL SCIENCE ELECTIVES | TOTAL | REQUIRED COURSES FOR TRANSFER: MATH 206  
GRADUATION REQUIREMENTS: (2) WI AND (1) HAP AND 2.0 GPA |
ASNS Degree Enrollment Increase

Projected Growth
ASNS Graduates from UHCCs

- 2008: 3 graduates
- 2009: 8 graduates
- 2010: 11 graduates
- 2011: 11 graduates
- 2012: 14 graduates
- 2013: 40 graduates
- 2014: 51 graduates
ASNS Transfers to 4-Year Campuses 2008-2014

Includes both, graduates who transferred with and without ASNS degree from a UHCC

- Mānoa: 209
- Hilo: 13
- West O'ahu: 9
ASNS Transfers to UH Mānoa

Transfer with ASNS to ASNS Path
Transfer to 4-Year w/o ASNS
ASNS Engineering – Higher Ed

ASNS Check Sheet

MA, MS, PhD
BA, BS
ASNS, AA
HS Diploma

UHCC Gen Ed

A.S. Degrees
A.A. Degrees

Physical Science
Data Science
Biological Science
Engineering
WORKFORCE

CTE

Hawai‘i DOE STEM

A.S. Degrees

A.A. Degrees

ASNS

UHCC Gen Ed

GRADUATE SCHOOL

STEM MAJORS

Transfer Bridge

Transition Bridge

Technical Job

CTE

Professional Skills Job

Mid Skills Job

Professional Skills Job

Mid Skills Job

Technical Job
ASNS Engineering - Workforce

Professional Skills Job

Mid Skills Job

Technical Job

* Engineering Technology
* Industrial Machinery
* Operating Engineers
* Support Specialist

ASNS

A.S. Degrees

A.A. Degrees

UHCC Gen Ed

Data Science

Physical Science

Biological Science

Engineering