University of Hawai'i at Mānoa  
College of Natural Sciences Program Sheet 2021-2022  
Bachelor of Science (BS) in Mathematics  
Computational Science Track  
Admissions: Open  Process: Declaration  
Min. Total Credits: 120 (113 in core & major + 7 in electives)

### Degree Requirements

#### Bachelor of Science Requirements
- Calculus I
- Calculus II
- Chemistry I with lab
- Chemistry II with lab
- Physics I with lab
- Physics II with lab

*Refer to major requirements for the specific courses that satisfy these requirements.*

#### Credit Maximums
- 8 KRS activity
- 9 Directed Reading / Research
- 12 Practicum / Internship

### UHM General Education Core Requirements

#### Foundations
- FW ENG 100, 100A, 190, ESL 100, or AMST 111
- FQ* MATH 241 or 251A
- FG (A / B / C)
- FG (A / B / C)

*Note: This requirement changed in Fall 2018. If you entered the UH System prior to that, please see your college/school advisor.*

#### Diversification
- DA / DH / DL
- DA / DH / DL
- DB
- DP PHYS 170
- DY PHYS 170L
- DS
- DS

*See degree, college and major requirements for courses that can also fulfill these.*

### UHM Graduation Requirements

#### Focus
- H
- E (300+)
- O (300+)
- W
- W
- W
- W (300+)
- W (300+)

#### Hawaiian / Second Language
- 101
- 102
- 201
- 202

### Credit Minimums
- 120 total applicable
- 30 in residence at UHM
- 45 upper division (300+ level) credits

### Grade Point Average
- 2.0 cumulative or higher (Note: Other GPAs may be required.)
- Good academic standing

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This program sheet was prepared to provide information and does not constitute a contract. See back for major requirements. Meet regularly with your major advisor.
**Admission:** Open

**Application:** NA

**Min. major credits:** BS = 45 (69-70 with related requirements)

**Min. C grade (not C-)** in courses

## Requirements

### Mathematics Prerequisites Requirements (11-12 credits)

- MATH 241* or 251A*<br>  
- MATH 242 or 252A<br>
- MATH 243 or 253A

### Related Mathematics Requirements (13 credits)

- PHYS 170*DP / 170L*<br>  
- PHYS 272*DP / 272L*<br>
- ICS 111

### Mathematics Courses (45 credits; see department for approved courses; see catalog for prerequisites)

Students must demonstrate an understanding of algorithms and logic, as well as precision of thinking. Courses that satisfy this requirement are MATH 190, 301, 304L, 305L, 407, 414; CEE 417; EE 160; ERTH 250; ICS 110C, 110D, 111, 211; ME 360; PHYS 305.

- MATH 244 or 253A

30 core credits in MATH 300-479 courses:

- MATH 304  
- MATH 305  
- MATH 311 or 307  
- MATH 321  
- MATH 331  
- MATH 402  
- MATH 407  
- MATH 411  
- MATH 414

10 related credits of ICS courses:

- ICS 211  
- ICS 212  
- ICS 484

The following requirements must be fulfilled in regards to the 43 above credits (check completed):

- 6 credit hours in writing-intensive mathematics courses
- 12 credit hours in courses numbered above 400
- MATH 480 (CR/NC only) (Spring only, last semester)

## Additional Mathematics Restrictions

*Only one of MATH 307 and 311 may be counted toward major requirements.*

*Mandatory advising each semester prior to registration.

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Student Academic Success Center; Sinclair 301; (808) 956-5911; cnsadvis@hawaii.edu; natsci.manoa.hawaii.edu/sasc

Mathematics Department: Keller 401-A; (808) 956-4680; office@math.hawaii.edu; www.math.hawaii.edu

Mathematics Undergraduate Advisor: Keller 419; (808) 956-4679

There may be exceptions to the major requirements listed above. Please schedule an advising appointment with Undergraduate Advising personnel for more detailed information.