### University of Hawai‘i at Mānoa
College of Arts & Sciences
Program Sheet 2011-2012

**Bachelor of Arts/Science (BA/BS) in Physics**

**Admissions:** Open  
**Process:** Declaration

Min. Total Credits: 124 (BA = 111 in core & major + 13 in electives; BS = 108 in core & major + 16 in electives)

### UHM General Education Core Requirements

<table>
<thead>
<tr>
<th>Foundations</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FW</td>
<td></td>
</tr>
<tr>
<td>FS</td>
<td></td>
</tr>
<tr>
<td>FG (A / B / C)</td>
<td></td>
</tr>
<tr>
<td>FG (A / B / C)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Diversification</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DA / DH / DL</td>
<td></td>
</tr>
<tr>
<td>DA / DH / DL</td>
<td></td>
</tr>
<tr>
<td>DB</td>
<td></td>
</tr>
<tr>
<td>DP</td>
<td></td>
</tr>
<tr>
<td>DY</td>
<td></td>
</tr>
<tr>
<td>DS</td>
<td></td>
</tr>
<tr>
<td>DS</td>
<td></td>
</tr>
</tbody>
</table>

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

### UHM Graduation Requirements

<table>
<thead>
<tr>
<th>Focus</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td></td>
</tr>
<tr>
<td>E (300+)</td>
<td></td>
</tr>
<tr>
<td>O (300+)</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W</td>
<td></td>
</tr>
<tr>
<td>W (300+)</td>
<td></td>
</tr>
<tr>
<td>W (300+)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hawaiian / Second Language</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td></td>
</tr>
<tr>
<td>102</td>
<td></td>
</tr>
<tr>
<td>201</td>
<td></td>
</tr>
<tr>
<td>202</td>
<td></td>
</tr>
</tbody>
</table>

### Credit Minimums

- 124 total applicable
- 30 in residence at UHM

### Grade Point Average

- 2.0 cumulative or higher *(Note: Other GPAs may be required.)*
- Good academic standing

### Degree Requirements

#### Bachelor of Arts Requirement (Can also fulfill FS)

- MATH 100, 112, 140, 161, 203, 215, 241, 251A; PHIL 110, 111; BUS 250; ICS 141, 241; NREM 203; or SOCS 150

#### Bachelor of Science Requirements

- MATH 215*FS or 241*FS
- MATH 216 or 242
- DB course
- CHEM 161*DP / 161L*DY
- CHEM 162*DP / 162L*DY
- PHYS 151*DP or 170*DP / 151L*DY or 170L*DY
- PHYS 152*DP or 272*DP / 152L*DY or 272L*DY

### College Requirements

#### A & S Options – Complete at least one option

 *(BA Courses cannot double count with Gen. Ed. Core)*

- Bachelor of Arts Breadth (3 credit each)
  - AH
  - LLL
  - NS
  - SS

- Bachelor of Arts Depth – see list of A & S depts.
  - Minor
  - Certificate
  - 2nd A & S Major

- Bachelor of Science
  - See degree requirements above.

### Credit Minimums

- 60 non-introductory

### Credit Maximums

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

---

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.
## Major Requirements for BA or BS in Physics

Admission: Open  
Application: NA  
Min. major credits: BA = 40 (66 with related requirements); BS = 46 (72 with related requirements)  
Min. C grade (not C-) in all courses

### Requirements

#### Physics Related Requirements (25 credits)

- CHEM 161*DP / 161L*DY  
- CHEM 162*DP / 162L*DY or 171/171L or 181A/181L  
- MATH 241*FS  
- MATH 242  
- MATH 243  
- MATH 244  
- MATH 311  

_MATH 251A*FS, 252A and 253A may be substituted for MATH 241-244._  
_MATH 215*FS and 216 may be substituted for 241 and 242 with approval from physics advisor._

#### Physics Core Courses (38-39 credits; see catalog for prerequisites)

- PHYS 170*DP / 170L*DY  
- PHYS 272*DP / 272L*DY  
- PHYS 274*DP / 274L*DY  
- PHYS 310  
- PHYS 350  
- PHYS 400  
- PHYS 430  
- PHYS 450  
- PHYS 480 / 480L  

_Two of the following:_  
- PHYS 305  
- PHYS 475  
- PHYS 481L

*PHYS 170/170L and 272/272L may be satisfied by PHYS 151*DP/151L*DY and 152*DS/152L*DP with approval from physics advisor.*

- BA only (3 credits)  
  - PHYS 440, 460, 481, or 490

- BS only (9 credits)  
  - PHYS 311  
  - PHYS 481  
  - PHYS 440, 460, or 490

### Notes

Colleges of Arts and Sciences Student Academic Services: QLCSS 113; (808) 956-8755  
Physics Department: Watanabe 416; (808) 956-7087; physics@hawaii.edu; www.phys.hawaii.edu  
Physics Undergraduate Advisors: Eric Szarmes; Watanabe 212; (808) 956-2923; szarmes@hawaii.edu  
Michael Nassir; Watanabe 426; (808) 956-2922; nassir@hawaii.edu  