

**University of Hawai‘i at Mānoa**  
**College of Natural Sciences/School of Life Sciences Program Sheet 2024-2025**  
**Bachelor of Science (BS) in Molecular Cell Biology**  
**Admissions: Open    Process: Declaration**  
**Min. Total Credits: 120 (111 in core & major + 9 in electives)**

| UHM General Education Core Requirements                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Foundations</b>                                                                                                                       |
| <input type="checkbox"/> FW ENG 100, 100A, 190, ESL 100, or AMST 111                                                                     |
| <input type="checkbox"/> FQ* MATH 215, 241, or 251A                                                                                      |
| <input type="checkbox"/> FG (A / B / C)                                                                                                  |
| <input type="checkbox"/> FG (A / B / C)                                                                                                  |
| <i>*Note: This requirement changed in Fall 2018. If you entered the UH System prior to that, please see your college/school advisor.</i> |
| <b>Diversification</b>                                                                                                                   |
| <input type="checkbox"/> DA / DH / DL                                                                                                    |
| <input type="checkbox"/> DA / DH / DL                                                                                                    |
| <input type="checkbox"/> DB BIOL 171, 172                                                                                                |
| <input type="checkbox"/> DP CHEM 161                                                                                                     |
| <input type="checkbox"/> DY BIOL 171L, 172L                                                                                              |
| <input type="checkbox"/> DS                                                                                                              |
| <input type="checkbox"/> DS                                                                                                              |
| <i>* See degree, college and major requirements for courses that can also fulfill these.</i>                                             |
| <b>UHM Graduation Requirements</b>                                                                                                       |
| <b>Focus</b>                                                                                                                             |
| <input type="checkbox"/> H                                                                                                               |
| <input type="checkbox"/> E (300+)                                                                                                        |
| <input type="checkbox"/> O (300+)                                                                                                        |
| <input type="checkbox"/> W                                                                                                               |
| <input type="checkbox"/> W                                                                                                               |
| <input type="checkbox"/> W                                                                                                               |
| <input type="checkbox"/> W (300+)                                                                                                        |
| <input type="checkbox"/> W (300+)                                                                                                        |
| <b>Hawaiian / Second Language</b>                                                                                                        |
| <input type="checkbox"/> 101                                                                                                             |
| <input type="checkbox"/> 102                                                                                                             |
| <input type="checkbox"/> 201                                                                                                             |
| <input type="checkbox"/> 202                                                                                                             |
| <b>Credit Minimums</b>                                                                                                                   |
| • 120 total applicable                                                                                                                   |
| • 30 in residence at UHM                                                                                                                 |
| • 35 major-required lower division/25 upper division (300+ level) credits                                                                |
| <b>Grade Point Average</b>                                                                                                               |
| • 2.0 cumulative or higher (Note: Other GPAs may be required.)                                                                           |
| • Good academic standing                                                                                                                 |

| Degree Requirements                                                                          |
|----------------------------------------------------------------------------------------------|
| <b>Bachelor of Science Requirements</b>                                                      |
| <input type="checkbox"/> Calculus I                                                          |
| <input type="checkbox"/> Calculus II                                                         |
| <input type="checkbox"/> Chemistry I with lab                                                |
| <input type="checkbox"/> Chemistry II with lab                                               |
| <input type="checkbox"/> Physics I with lab                                                  |
| <input type="checkbox"/> Physics II with lab                                                 |
| <i>Refer to major requirements for the specific courses that satisfy these requirements.</i> |
| <b>College Requirements</b>                                                                  |
| <b>Credit Maximums</b>                                                                       |
| • 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 BS in Molecular Cell Biology                                                                                                                                                                                                                                                                                                                                                                                                                                |                                |                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------------------|
| Admission: Open                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                |                                |
| Application: NA                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                |                                |
| Min. major credits: BS = 47 (78-80 with related requirements)                                                                                                                                                                                                                                                                                                                                                                                                                      |                                |                                |
| Minimum C grade (not C-) in all prerequisite courses                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                |                                |
| Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                |                                |
| Molecular Cell Biology Core Requirements (35 credits)                                                                                                                                                                                                                                                                                                                                                                                                                              |                                |                                |
| <input type="checkbox"/> BIOL 171 *DB / <input type="checkbox"/> 171L *DY                                                                                                                                                                                                                                                                                                                                                                                                          |                                |                                |
| <input type="checkbox"/> BIOL 172 *DB / <input type="checkbox"/> 172L *DY                                                                                                                                                                                                                                                                                                                                                                                                          |                                |                                |
| <input type="checkbox"/> BIOL 275 / <input type="checkbox"/> 275L                                                                                                                                                                                                                                                                                                                                                                                                                  |                                |                                |
| <input type="checkbox"/> BIOL 375 / <input type="checkbox"/> 375L                                                                                                                                                                                                                                                                                                                                                                                                                  |                                |                                |
| <input type="checkbox"/> BIOL 407                                                                                                                                                                                                                                                                                                                                                                                                                                                  | (Fall only)                    |                                |
| <input type="checkbox"/> BIOL 408                                                                                                                                                                                                                                                                                                                                                                                                                                                  | (Spring only)                  |                                |
| <input type="checkbox"/> BIOL 402/MBBE 402 or BIOC 441                                                                                                                                                                                                                                                                                                                                                                                                                             |                                |                                |
| <input type="checkbox"/> BIOL 472                                                                                                                                                                                                                                                                                                                                                                                                                                                  | (Spring only)                  |                                |
| <input type="checkbox"/> MICR 314                                                                                                                                                                                                                                                                                                                                                                                                                                                  | (Spring only)                  |                                |
| <input type="checkbox"/> MICR 461                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                |                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                |                                |
| Molecular Cell Biology Related Requirements (12 credits total from Group 1 and 2)                                                                                                                                                                                                                                                                                                                                                                                                  |                                |                                |
| Group 1 Courses                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                |                                |
| ICS 475, MATH 304, 305, MBBE 451, MICR 351, 431, 463, 470, 475, 490, PHYL 301, ZOOL 420, 442, BIOL/MICR/BOT/ZOOL 499                                                                                                                                                                                                                                                                                                                                                               |                                |                                |
| <input type="checkbox"/> _____                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                |                                |
| Group 2 Courses (2 courses)                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                |                                |
| BIOL 408L, 472L, MICR 351L, 461L, 463L, 470L, 475L, 490L, PHYL 301L, ZOOL 420L                                                                                                                                                                                                                                                                                                                                                                                                     |                                |                                |
| <input type="checkbox"/> _____                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <input type="checkbox"/> _____ |                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                |                                |
| Related Major Courses (31-33 credits)                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                |                                |
| <input type="checkbox"/> MATH 215 *FQ, 241 *FQ, or 251A *FQ                                                                                                                                                                                                                                                                                                                                                                                                                        |                                |                                |
| <input type="checkbox"/> MATH 216, 242, or 252A                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                |                                |
| <input type="checkbox"/> CHEM 161 *DP / <input type="checkbox"/> 161L *DY                                                                                                                                                                                                                                                                                                                                                                                                          |                                |                                |
| <input type="checkbox"/> CHEM 162 / <input type="checkbox"/> 162L                                                                                                                                                                                                                                                                                                                                                                                                                  |                                |                                |
| <input type="checkbox"/> CHEM 272 / <input type="checkbox"/> 272L                                                                                                                                                                                                                                                                                                                                                                                                                  |                                |                                |
| <input type="checkbox"/> CHEM 273                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                |                                |
| <input type="checkbox"/> PHYS 151/151L or <input type="checkbox"/> 170/170L                                                                                                                                                                                                                                                                                                                                                                                                        |                                |                                |
| <input type="checkbox"/> PHYS 152/152L or <input type="checkbox"/> 272/272L                                                                                                                                                                                                                                                                                                                                                                                                        |                                |                                |
| Notes                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                |                                |
| College Advising: College of Natural Sciences Student Academic Success Center; Hamilton Library 002K; (808) 956-5911; <a href="mailto:cnasadv@sas.hawaii.edu">cnasadv@sas.hawaii.edu</a> ; <a href="mailto:natsci.manoa.hawaii.edu/sasc">natsci.manoa.hawaii.edu/sasc</a><br>School of Life Sciences: Edmondson 216; (808) 956-8303; <a href="mailto:lifesci@hawaii.edu">lifesci@hawaii.edu</a> ; <a href="http://manoa.hawaii.edu/lifesciences">manoa.hawaii.edu/lifesciences</a> |                                |                                |