BS Cellular and Molecular Biology Suggested Course Sequence (2023-2024)

- Students should take the Chemistry Placement test (available in Canvas) prior to New Student Advising.
- A Chemistry Placement score ≥35 is a pre-requisite for BIO 2101 and CHM 1211.
- Students who score <35 on the Chemistry Placement test, or who would benefit from an introduction to Chemistry, should take CHM 1310 in Autumn quarter, then take BIO 2101 and CHM 1211 in Winter quarter.

Students interested in careers in the health sciences should take PPHS 1200, PPHS 1800 and PPHS 3400. BIO 3896 (Medical Terminology) may also be beneficial. See the Pre-Professional Health Sciences program website for more information.

This Suggested Course Sequence is a potential plan for how to complete the major within four years. Please consult with a departmental faculty advisor for course advisement

Four-Year Plan (>35 on Chemistry Placement Test)

| | | YEAR 1 | |
|--|-------------------------------|--|--|
| Autumn | Winter | Spring | Notes |
| BIO 1859 (1) | BIO 2101 (5) * | BIO 2102 (5) | Take Math Placement Test (in Canvas) if you |
| CHM 1211 (5) | CHM 1212 (5) | CHM 1213 (3) ** | are at Math Level 0 or A at time of admission; |
| UCOL 1000 (1) | PPHS 1200 (1) | CHM 2213 (2) ** | Math Level B is a pre-requisite for BIO 2102, |
| (-) | | | BIO 2103, CHM 1212 and MAT 2360. |
| Any quarter: | 1 | | Students who test into Level 0 or A should plan |
| First-year general education courses (WRI 1000, WRI 1100, UFDN 1000) | | | to take MAT 0144 and/or MAT 0145 to |
| Thist your general education | ation courses (THE 1000, | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | achieve Math Level B. |
| | | | demote Main Ector B. |
| | | | * Students who test at Math Placement Level B |
| | | | and who either score \geq 45 on the Chemistry |
| | | | Placement Test or transfer in the complete |
| | | | General Chemistry sequence may take BIO |
| | | | 2103 in Autumn 2023. |
| | | | 2103 III 7 (utuliiii 2023. |
| | | | ** CHM 1213/2213 are recommended for |
| | | | many graduate programs. |
| | | YEAR 2 | |
| Autumn | Winter | Spring | Notes |
| BIO 2103 (5) | CHM 3372 (5) | CHM 3373 (5) | MAT 2360 is a pre-requisite for BIO 3325 and |
| CHM 3371 (5) | PHY 1102 / 1122 (5) | PHY 1103 / 1123 (5) | BIO 4360. |
| PHY 1101 / 1121 (5) | | | . |
| Any quarter: | | | * Take Calculus Placement Test in Canvas |
| • MAT 2360 (5) | | | first. MAT 1235 may be required by some |
| | (5) or MAT 1234 (5) * | | graduate programs. |
| • 3 credits of researc | h: BIO 4978 (1) and 4979 | (2) in years $2 - 4$. | DI (() 110 |
| | | | Physics (either 110x series or 112x series) is |
| | | VEADA | recommended for most graduate programs. |
| Austrope | Winter | YEAR 3 | Notes |
| BIO 3325 (5) | CHM 4362 (5) | Spring BIO 3351 (5) | BIO 3325 is offered both Autumn and Winter. |
| CHM 4361 (5) | CIIWI 4302 (3) | Apply to graduate! | It is a pre-requisite for BIO 4325 (only offered |
| Any quarter: | | Apply to graduate: | in Winter) and BIO 4352 (only offered in |
| • BIO 3899 (1) | | | Spring). |
| | logy selected from: BIO 4 | 256 4410 4412 4415 | Spinig). |
| 4418 or 4419 in ye | | 230, 4410, 4413, 4413, | * BIO 4415, 4418 and 4419 may not count for |
| | ve courses selected from: | DIO 2350 3615 4320 | both the Physiology and Electives categories. |
| | 4418, 4419, 4420, 4435 or | | |
| -1330, T300, 11 13, | 1110, 1117, 1120, 1137 0 | YEAR 4 | |
| Autumn | Winter | Spring | Notes |
| CHM 3225 (5) | BIO 4325 (5) | BIO 4352 (5) | Check the time schedule, as most courses are |
| Any quarter: | <u> </u> | offered only in certain quarters. | |
| | ice, for a total of 2 credits |) | |
| (********************************** | , :: | , | II . |

Four-Year Plan (<35 on Chemistry Placement Test)

| | | YEAR 1 | |
|--|---|---|---|
| Autumn | Winter | Spring | Notes |
| BIO 1859 (1) | BIO 2101 (5) | BIO 2102 (5) | Take Math Placement Test (in Canvas) if you |
| CHM 1310 (5) | CHM 1211 (5) | CHM 1212 (5) | are at Math Level 0 or A at time of admission; |
| UCOL 1000 (1) | PPHS 1200 (1) | | Math Level B is a pre-requisite for BIO 2102, |
| (-) | | | BIO 2103, CHM 1212 and MAT 2360. |
| Any quarter: | | | Students who test into Level 0 or A should plan |
| First-year general education courses (WRI 1000, WRI 1100, UFDN 1000) | | | to take MAT 0144 and/or MAT 0145 to |
| i iist year general eade | ation courses (With 1000, | Wid 1100, 61 Bit 1000) | achieve Math Level B. |
| | | | demove Main Level B. |
| | | | BIO 2102 and BIO 2103 can be taken in either |
| | | | order. |
| | | | order. |
| | | YEAR 2 | |
| Autumn | Winter | Spring | Notes |
| BIO 2103 (5) | PHY 1102 / 1122 (5) | CHM 1213 (3) * | MAT 2360 is a pre-requisite for BIO 3325 and |
| PHY 1101 / 1121 (5) | | CHM 2213 (2) * | BIO 4360. |
| ` ' | | PHY 1103 / 1123 (5) | |
| Any quarter: | | | Physics (either 110x series or 112x series) is |
| • MAT 2360 (5) | | | recommended for most graduate programs. |
| | (5) or MAT 1234 (5) ** | | |
| | ch: BIO 4978 (1) and 4979 | (2) in years 2 / | * CHM 1213/2213 are recommended for most |
| 5 credits of research | II. BIO 4978 (1) and 4979 | (2) in years $2-4$. | graduate programs. |
| | | | 8-11-11-11-11-11-11-11-11-11-11-11-11-11 |
| | | | |
| | | | ** Take Calculus Placement Test in Canvas |
| | | | ** Take Calculus Placement Test in Canvas first. MAT 1235 may be required by some |
| | | | first. MAT 1235 may be required by some |
| | | | |
| | | YEAR 3 | first. MAT 1235 may be required by some graduate programs. |
| Autumn | Winter | Spring | first. MAT 1235 may be required by some graduate programs. Notes |
| | Winter CHM 3372 (5) | | first. MAT 1235 may be required by some graduate programs. |
| CHM 3371 (5) | | Spring | first. MAT 1235 may be required by some graduate programs. Notes BIO 3325 is offered both Autumn and Winter. |
| CHM 3371 (5) BIO 3325 (5) | | Spring CHM 3373 (5) | first. MAT 1235 may be required by some graduate programs. Notes BIO 3325 is offered both Autumn and Winter. |
| CHM 3371 (5) BIO 3325 (5) Any quarter: | | Spring CHM 3373 (5) | first. MAT 1235 may be required by some graduate programs. Notes BIO 3325 is offered both Autumn and Winter. It is a pre-requisite for BIO 4325 (only offered) |
| CHM 3371 (5) BIO 3325 (5) Any quarter: • BIO 3899 (1) | CHM 3372 (5) | Spring CHM 3373 (5) Apply to graduate! | first. MAT 1235 may be required by some graduate programs. Notes BIO 3325 is offered both Autumn and Winter. It is a pre-requisite for BIO 4325 (only offered in Winter) and BIO 4352 (only offered in |
| CHM 3371 (5) BIO 3325 (5) Any quarter: BIO 3899 (1) credits of Physio | CHM 3372 (5) logy selected from: BIO 4 | Spring CHM 3373 (5) Apply to graduate! | first. MAT 1235 may be required by some graduate programs. Notes BIO 3325 is offered both Autumn and Winter. It is a pre-requisite for BIO 4325 (only offered in Winter) and BIO 4352 (only offered in |
| CHM 3371 (5) BIO 3325 (5) Any quarter: BIO 3899 (1) 5 credits of Physio 4418 or 4419 in ye | CHM 3372 (5) logy selected from: BIO 4 ars 3 – 4.* | Spring CHM 3373 (5) Apply to graduate! 4256, 4410, 4413, 4415, | first. MAT 1235 may be required by some graduate programs. Notes BIO 3325 is offered both Autumn and Winter. It is a pre-requisite for BIO 4325 (only offered in Winter) and BIO 4352 (only offered in Spring). |
| CHM 3371 (5) BIO 3325 (5) Any quarter: BIO 3899 (1) 5 credits of Physio 4418 or 4419 in ye 10 credits of electi | CHM 3372 (5) logy selected from: BIO 4 ears 3 – 4.* ve courses selected from: | Spring CHM 3373 (5) Apply to graduate! 3256, 4410, 4413, 4415, BIO 3320, 3350, 3615, | Rotes BIO 3325 is offered both Autumn and Winter. It is a pre-requisite for BIO 4325 (only offered in Winter) and BIO 4352 (only offered in Spring). * BIO 4415, 4418 and 4419 may not count for |
| CHM 3371 (5) BIO 3325 (5) Any quarter: BIO 3899 (1) 5 credits of Physio 4418 or 4419 in ye 10 credits of electi | CHM 3372 (5) logy selected from: BIO 4 ars 3 – 4.* | Spring CHM 3373 (5) Apply to graduate! 3256, 4410, 4413, 4415, BIO 3320, 3350, 3615, | Rotes BIO 3325 is offered both Autumn and Winter. It is a pre-requisite for BIO 4325 (only offered in Winter) and BIO 4352 (only offered in Spring). * BIO 4415, 4418 and 4419 may not count for |
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| CHM 3371 (5) BIO 3325 (5) Any quarter: BIO 3899 (1) credits of Physio 4418 or 4419 in ye 10 credits of electi | CHM 3372 (5) logy selected from: BIO 4 ears 3 – 4.* ve courses selected from: | Spring CHM 3373 (5) Apply to graduate! 3256, 4410, 4413, 4415, BIO 3320, 3350, 3615, | Notes Notes BIO 3325 is offered both Autumn and Winter. It is a pre-requisite for BIO 4325 (only offered in Winter) and BIO 4352 (only offered in Spring). * BIO 4415, 4418 and 4419 may not count for both the Physiology and Electives categories. Check the time schedule, as most courses are |
| CHM 3371 (5) BIO 3325 (5) Any quarter: BIO 3899 (1) 5 credits of Physio 4418 or 4419 in ye 10 credits of electif 4330, 4360, 4415, | CHM 3372 (5) logy selected from: BIO 4 ears 3 – 4.* ve courses selected from: 4418, 4419, 4420, 4435 o | Spring CHM 3373 (5) Apply to graduate! 1256, 4410, 4413, 4415, BIO 3320, 3350, 3615, r 4744 in years 3 – 4. | Notes Notes BIO 3325 is offered both Autumn and Winter. It is a pre-requisite for BIO 4325 (only offered in Winter) and BIO 4352 (only offered in Spring). * BIO 4415, 4418 and 4419 may not count for both the Physiology and Electives categories. Check the time schedule, as most courses are offered only in certain quarters. |
| CHM 3371 (5) BIO 3325 (5) Any quarter: BIO 3899 (1) credits of Physio 4418 or 4419 in ye 10 credits of electir 4330, 4360, 4415, | CHM 3372 (5) logy selected from: BIO 4 ears 3 – 4.* ve courses selected from: 4418, 4419, 4420, 4435 o Winter | Spring CHM 3373 (5) Apply to graduate! 3256, 4410, 4413, 4415, BIO 3320, 3350, 3615, r 4744 in years 3 – 4. YEAR 4 Spring | Notes Notes BIO 3325 is offered both Autumn and Winter. It is a pre-requisite for BIO 4325 (only offered in Winter) and BIO 4352 (only offered in Spring). * BIO 4415, 4418 and 4419 may not count for both the Physiology and Electives categories. Check the time schedule, as most courses are |
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| CHM 3371 (5) BIO 3325 (5) Any quarter: BIO 3899 (1) 5 credits of Physio 4418 or 4419 in ye 10 credits of electi 4330, 4360, 4415, Autumn CHM 3225 (5) CHM 4361 (5) Any quarter: | CHM 3372 (5) logy selected from: BIO 4 ears 3 – 4.* ve courses selected from: 4418, 4419, 4420, 4435 o Winter BIO 4325 (5) | Spring CHM 3373 (5) Apply to graduate! 256, 4410, 4413, 4415, BIO 3320, 3350, 3615, r 4744 in years 3 – 4. YEAR 4 Spring BIO 4352 (5) | Notes Notes BIO 3325 is offered both Autumn and Winter. It is a pre-requisite for BIO 4325 (only offered in Winter) and BIO 4352 (only offered in Spring). * BIO 4415, 4418 and 4419 may not count for both the Physiology and Electives categories. Check the time schedule, as most courses are offered only in certain quarters. |