



## School of Natural Sciences and Mathematics

Department of Biology

### BI-410L Advanced Human Physiology I Lab

Wednesday 2:30–5:20 pm | Henry Hall, Lab 3

Credits: 1 | Section: 01 | Term: Fall Semester 2026

#### Instructor Information

|                      |                                                                                                                                                                                                                                                                                                                                           |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Instructor           | Michael Weichhaus, PhD                                                                                                                                                                                                                                                                                                                    |
| Email                | michael.weichhaus@chaminade.edu                                                                                                                                                                                                                                                                                                           |
| Phone                | 808.440.4286                                                                                                                                                                                                                                                                                                                              |
| Office Location      | Wesselkamper Science Center, room 107                                                                                                                                                                                                                                                                                                     |
| Office Hours         | Monday, Wednesday & Friday: 12:00–2:00 pm<br>Tuesday & Thursday: 1:00–2:00 pm                                                                                                                                                                                                                                                             |
| Office Hours Sign-Up | Office hours run on a sign-up system. Book a slot at:<br><a href="https://calendar.app.google/6x3kd3fb4F6yMmvUA">https://calendar.app.google/6x3kd3fb4F6yMmvUA</a><br>When you sign up you choose whether to meet in person in Wesselkamper 107 or online via Google Meet; the meeting link is generated automatically with your booking. |

#### Communication

Instructions and updates are given verbally during class and are also posted using the Announcements feature in Canvas. Questions about this course may be emailed to the instructor or sent through the Canvas Inbox. You can expect a response within 24–48 hours on weekdays (Monday–Friday); messages sent over the weekend or a holiday will be answered on the next business day. For questions that need a longer conversation, please book an office-hours slot rather than email.

#### School & Department

|            |                                                                                                                                            |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| School     | School of Natural Sciences and Mathematics                                                                                                 |
| Location   | Wesselkamper Science Center, room 115                                                                                                      |
| Phone      | (808) 440-4204                                                                                                                             |
| Questions? | If you have questions regarding the Department of Biology, reach out to your instructor or the School of Natural Sciences and Mathematics. |

#### Course Description & Materials

##### Catalog Description

Laboratory course accompanying BI-410 Advanced Human Physiology I. Students carry out virtual and in-person investigations of human physiological systems, and design, conduct and report an original group research project.

Pre-Requisites: EN 102, COM 101, BI 307, BI 307L.

Co-Requisite: BI 410 Advanced Human Physiology I.

## Course Snapshot

|                           |                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Modality</b>           | Face-to-Face                                                                                                                                                                                                                                                                                                                                                   |
| <b>Meeting Location</b>   | Henry Hall, Lab 3                                                                                                                                                                                                                                                                                                                                              |
| <b>Meeting Days/Times</b> | Wednesday, 2:30–5:20 pm                                                                                                                                                                                                                                                                                                                                        |
| <b>Time Commitment</b>    | One-credit laboratory course. The laboratory meets for 170 minutes each week; work outside the session consists of PhysioEx exercises, lab report write-ups, the project discussions, and preparation of the group presentation and final report.                                                                                                              |
| <b>Required Materials</b> | PhysioEx 10.0 (Pearson / Benjamin Cummings) — <a href="http://physioex.com/login.html">http://physioex.com/login.html</a><br>Respondus LockDown Browser — required for every PhysioEx quiz. The later quizzes (Acid–Base Balance onward) additionally require a webcam. A laboratory notebook, and closed-toe shoes and a lab coat for all in-person sessions. |
| <b>Canvas</b>             | Course materials, announcements, and grades are posted to Canvas ( <a href="http://chaminade.instructure.com">chaminade.instructure.com</a> ). Check Canvas regularly — it is the official channel for this course.                                                                                                                                            |
| <b>Final Exam</b>         | There is no final examination for this laboratory. The final project paper is due Sunday, December 6, 2026.                                                                                                                                                                                                                                                    |
| <b>Semester Dates</b>     | Instruction: August 17 – December 4, 2026<br>Fall Wellness Week (no lab): Wednesday, October 14<br>Veterans Day (no lab): Wednesday, November 11<br>The laboratory meets 14 times across the semester.                                                                                                                                                         |

## Time Allocation

How this one-credit course meets the CUH Credit Hour Policy. The out-of-class estimates below use the Rice University Center for Teaching Excellence course workload rates, applied to the length and genre of each piece of writing and shared across a group of three where the work is collaborative:

- Seat time: 39.7 h (170 min per week; 14 meetings, after Fall Wellness Week and Veterans Day are removed)
- PhysioEx quizzes: 6 h (12 × 30 min — the simulations themselves are run during the laboratory session)
- Laboratory worksheets: completed and handed in during the session, so already counted in seat time
- Group lab reports: 6 h (3 reports, ≈2 h per student per report)
- Project discussions: 4 h (5 × ≈45 min to post and read the group's thread)
- Group presentation, materials list and protocol: 3 h (preparation begins in lab in week 6)
- Project final report — four sections and the final paper: 5 h (the drafting workshops in weeks 13–15 are held in lab)

Total: approximately 64 hours, of which 39.7 h is the scheduled laboratory session itself. A three-contact-hour weekly laboratory accounts for most of a one-credit course's time on its own, so the out-of-class commitment is roughly 24 hours across the semester — about 1.6 hours per week.

## Learning Outcomes

### Program Learning Outcomes (PLOs)

Upon completion of the program in Biology, a graduating student will demonstrate the following competencies:

- Explain fundamental biological concepts and their interrelationships across various levels of biological organization, from molecules to ecosystems, including cell biology, genetics, evolution, physiology, and ecology.
- Perform laboratory, field and computational techniques relevant to biological research, including accurate data collection, analysis, and interpretation.

- Design and conduct scientific investigations using advanced methodologies, technologies, and resources, and effectively communicate results to professional and lay audiences.
- Make ethically informed decisions in biological research and practice, considering bioethics and environmental ethics informed by indigenous and traditional knowledge and practices.
- Analyze societal challenges related to health and the environment through the lens of biological science, recognizing how biological knowledge and associated career paths can contribute to studying, addressing and solving these challenges.

### Course Learning Outcomes (CLOs)

Upon completion of BI-410L Advanced Human Physiology I Lab, the student will be able to:

- Interpret physiological data and draw reasonable conclusions.
- Formulate testable hypotheses.
- Design scientifically valid methods and carry out scientific experimentation.
- Argue for scientific approaches to testing hypotheses and present conclusions in writing.

### Marianist Values

This class represents one component of your education at Chaminade University of Honolulu. An education in the Marianist Tradition is marked by five principles, and you should take every opportunity to reflect on the role of these characteristics in your education and development:

- Education for formation in faith.
- Provide an integral, quality education.
- Educate in family spirit.
- Educate for service, justice and peace, and integrity of creation.
- Educate for adaptation and change.

Advanced Human Physiology Laboratory aligns with the Marianist value of providing an integral, quality education by offering students hands-on experience in exploring the physiological processes underlying human health. Through practical experiments and data analysis, students actively engage in the scientific method, deepening their understanding of complex concepts introduced in lectures. This experiential learning approach not only reinforces theoretical knowledge but also cultivates critical thinking and problem-solving skills. By working collaboratively in small groups, students develop a sense of community and shared responsibility, reflecting the Marianist family spirit and fostering an environment where collective learning and mutual support are paramount.

### Native Hawaiian Values

Education is an integral value in both Marianist and Native Hawaiian culture. Both recognize the transformative effect of a well-rounded, value-centered education on society, particularly in seeking justice for the marginalized, the forgotten, and the oppressed, always with an eye toward God (Ke Akua). This is reflected in the following 'Ōlelo No'eau:

- Educate for Formation in Faith (Mana): E ola au i ke akua ('Ōlelo No'eau 364) — May I live by God.
- Provide an Integral, Quality Education (Na'auao): Lawe i ka ma'alea a kū'ono'ono ('Ōlelo No'eau 1957) — Acquire skill and make it deep.
- Educate in Family Spirit ('Ohana): 'Ike aku, 'ike mai, kōkua aku kōkua mai; pela iho la ka nohana 'ohana ('Ōlelo No'eau 1200) — Recognize others, be recognized, help others, be helped; such is a family relationship.
- Educate for Service, Justice and Peace (Aloha): Ka lama kū o ka no'eau ('Ōlelo No'eau 1430) — Education is the standing torch of wisdom.
- Educate for Adaptation and Change (Aina): 'A'ohe pau ka 'ike i ka hālau ho'okahi ('Ōlelo No'eau 203) — All knowledge is not taught in the same school.

### Alignment of Course Learning Outcomes

|                        | CLO 1 | CLO 2 | CLO 3 | CLO 4 |
|------------------------|-------|-------|-------|-------|
| Marianist Values       | 2     | 2, 5  | 2     | 2, 4  |
| PLOs                   | 1, 2  | 3     | 2, 3  | 3, 4  |
| Native Hawaiian Values | 2     | 2, 5  | 2, 4  | 3, 4  |

## Attendance & In-Class Participation

### Attendance Policy

Students are expected to attend regularly all courses for which they are registered. Students should notify their instructor when illness or other extenuating circumstances prevent them from attending class, and make arrangements to complete missed work. Notification may be done by emailing the instructor directly or by calling the school office. It is the instructor's prerogative to modify deadlines of course requirements accordingly. Any student who stops attending a course without officially withdrawing may receive a failing grade.

Federal regulations require continued attendance for continued payment of financial aid. When illness or personal reasons necessitate continued absence, the student should communicate first with the instructor and then with the appropriate school office.

Students with disabilities who have obtained accommodations from Accessibility Services may be considered for an exception when the accommodation does not materially alter the attainment of the learning outcomes.

### In-Class Participation Expectations

Active, respectful engagement is essential. Students are expected to come prepared and contribute meaningfully to discussions, activities, and collaborative work.

Students are expected to:

- Come prepared — complete readings and activities before each session.
- Participate actively in discussions and group work, demonstrating critical thinking.
- Engage respectfully and honor diverse perspectives.
- Use personal devices for course purposes only unless otherwise directed.
- Submit work by established deadlines to support course pacing.

Attendance at the Wednesday laboratory session is essential. The in-person experiments use consumable materials and shared equipment and cannot be repeated for an individual student, and the decisions that shape your group's research project are made in the room. If you must miss a session, tell the instructor in advance so that your group is not left without you.

## Course Activities

|                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>PhysioEx Virtual Laboratories</b> | Twelve PhysioEx simulations run across the semester, covering cell transport, skeletal muscle, neurophysiology, the endocrine system, cardiovascular dynamics and physiology, respiratory mechanics, digestion, renal physiology, acid-base balance, blood analysis and serological testing. Each simulation is followed by a quiz taken through Canvas with Respondus LockDown Browser.<br>Approach each virtual lab with the same rigor as a physical one: record your data accurately, analyse your results critically, and connect what you see to the lecture material.                   |
| <b>Laboratory Worksheets</b>         | Two of the in-person activities — GI tract histology and carbohydrate identification — are recorded on a worksheet that you complete during the session and hand in at the end of the laboratory, by 5:30 pm. These are individual work. Because they are finished in the room there is nothing to write up afterwards, but they do depend on your being there and paying attention while the activity runs.                                                                                                                                                                                   |
| <b>Group Lab Reports</b>             | Three in-person ("wet") activities are written up as a group report: the fetal pig dissection, the oral glucose tolerance test, and urine acid measurement.<br>These reports are shorter and less formal than the project report, and are graded accordingly: the emphasis is on accurate recording of what you observed, correct interpretation of your own data, and clear presentation. Photographs, graphs and tables are expected where they carry the evidence, and are read and assessed as part of the report — embed them in the document rather than describing them in words alone. |

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <b>Research Project — Discussions</b>  | <p>Five online discussions in weeks 2–6 walk your research group through the stages of designing a study: topic selection and research question; literature review and hypothesis; experimental design; anticipated challenges and troubleshooting; and significance and future directions. Each discussion opens the corresponding lab session and closes Wednesday at 2:30 pm.</p> <p>These are guided, open-ended discussions. A mentor takes part in your group's thread and asks probing questions rather than supplying answers; the destination — a defensible, testable research question and a design to match — is one your group reaches itself. You are assessed individually on your engagement with that process, on the scientific reasoning you show, and on how you build on your groupmates' contributions — not on reaching any particular conclusion.</p> |
| <b>Research Project — Presentation</b> | <p>In week 7 each group presents and defends its proposed study to the class, and submits a list of the materials it will need and a written protocol. This is the point at which the design becomes final and ordering can begin, so the deadline is firm.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Research Project — Final Report</b> | <p>The project report is written in stages rather than all at once. The Introduction, Materials and Methods, Results, and Discussion are each submitted separately in weeks 12–15 and returned with detailed feedback. That feedback is formative: it is written to be acted on, and you are expected to revise each section in light of it.</p> <p>The final paper, due in finals week, brings the revised sections together into a single coherent report. It is assessed summatively — no further edits are invited after it is submitted, so treat it as the finished piece.</p>                                                                                                                                                                                                                                                                                          |

## Course Policies

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| <b>Late Work — PhysioEx Quizzes</b>    | A one-week grace period applies with no penalty. Beyond one week the quiz is not graded, though you are encouraged to complete it for your own benefit.                                                                                                                                                                                                                                                                                  |
| <b>Late Work — Worksheets</b>          | Worksheets are handed in at the end of the session in which the activity is run, so there is no late window. If you have to miss that session, speak to the instructor beforehand — the activity itself cannot be repeated for an individual student.                                                                                                                                                                                    |
| <b>Late Work — Group Lab Reports</b>   | Up to 24 hours late: 5% deduction. Between 24 hours and 7 days late: 10% deduction.                                                                                                                                                                                                                                                                                                                                                      |
| <b>Late Work — Project Discussions</b> | No late accommodation is provided: the discussion feeds decisions your group makes in the following laboratory session, and a contribution that arrives afterwards cannot serve that purpose. In practice the thread stays open and the mentor keeps responding for 24 hours after the deadline, and everything posted up to that point is read when the discussion is assessed — but plan on the posted deadline, not the grace window. |
| <b>Late Work — Group Presentation</b>  | No late accommodation will be made, except in the case of illness documented by a physician.                                                                                                                                                                                                                                                                                                                                             |
| <b>Late Work — Final Report</b>        | Because the deadline coincides with the end of the semester: up to 24 hours late, 5% deduction; between 24 and 48 hours late, 10% deduction. Beyond 48 hours the paper cannot be accepted.                                                                                                                                                                                                                                               |

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <b>Group Work</b>        | Group assignments receive a group grade, except for the project discussions, which are assessed individually. If a group encounters a problem that it cannot resolve — an absent member, an uneven division of labour — raise it with the instructor early rather than after the fact.                                                                                                                                                                                                                                                                        |
| <b>Laboratory Safety</b> | Closed-toe shoes and a lab coat are required for all in-person sessions. Follow the posted procedures, dispose of materials as directed, and report any spill or injury immediately. Students who arrive without appropriate footwear cannot take part in that session's activity.                                                                                                                                                                                                                                                                            |
| <b>Incomplete Grade</b>  | Students and instructors may negotiate an incomplete grade when there are specific justifying circumstances. An Incomplete Contract (available from the Divisional Secretary and the Portal) must be completed. When submitting a grade, the "I" will be accompanied by the alternative grade that will automatically be assigned after 90 days (IB, IC, ID, IF); if only an "I" is submitted the default grade is F. The work must be completed, evaluated and reported within 90 days after the end of the semester. This limit is unlikely to be extended. |
| <b>Syllabus Changes</b>  | While the provisions of this syllabus are as accurate and complete as possible, the instructor reserves the right to change any provision at any time. Changes will be announced in class and posted to Canvas.                                                                                                                                                                                                                                                                                                                                               |

## Final Grades

Your current grade is updated frequently and can be viewed in Canvas. Final grades are submitted to Self-Service ([selfservice.chaminade.edu](https://selfservice.chaminade.edu)).

### Grade Weighting

| Component                                  | Weight      |
|--------------------------------------------|-------------|
| PhysioEx Quizzes                           | 25%         |
| Lab Reports (worksheets and group reports) | 25%         |
| Project Presentation                       | 20%         |
| Project Final Report                       | 20%         |
| Project Discussions                        | 10%         |
| <b>Total</b>                               | <b>100%</b> |

### Grading Scale

| Grade | Range         |
|-------|---------------|
| A     | 90% and above |
| B     | 80–89%        |
| C     | 70–79%        |
| D     | 60–69%        |
| F     | 59% and below |

## What the Letter Grades Mean

### **A — Outstanding scholarship and an unusual degree of intellectual initiative.**

Reflects mastery of the course material and an exceptional ability to synthesize and apply knowledge creatively, with critical thinking, originality, and precision in argument and interpretation. Work at this level goes beyond mere accuracy and skillfulness.

### **B — Superior work done in a consistent and intellectual manner.**

Represents strong understanding and application of course concepts, theories, and principles. Work is consistently thorough and well organized, demonstrating analytical ability and clear communication.

### **C — Average grade indicating a competent grasp of subject matter.**

Denotes satisfactory comprehension with the ability to apply key concepts, but may lack depth in understanding or application. Meets the basic course requirements.

### **D — Inferior work of the lowest passing grade, not satisfactory for fulfillment of prerequisite coursework.**

Reflects limited understanding and minimal engagement with key concepts. Work is often incomplete, superficial, or lacks cohesion.

### **F — Failed to grasp the minimum subject matter; no credit given.**

Signifies a lack of basic comprehension and an inability to apply or articulate fundamental concepts. Students receiving an "F" must re-take the course or an equivalent to obtain credit.

## Important Information

### Academic Honesty

Academic honesty is an essential aspect of all learning, scholarship, and research. It is one of the values regarded most highly by academic communities throughout the world. Violations of the principle of academic honesty are extremely serious and will not be tolerated.

Students are responsible for promoting academic honesty at Chaminade by not participating in any act of dishonesty and by reporting any incidence of academic dishonesty to an instructor or to a University official. Academic dishonesty may include theft of records or examinations, alteration of grades, plagiarism, and unauthorized and/or undisclosed AI usage, in addition to more obvious dishonesty. See catalog section Student Use of Artificial Intelligence in Academic Work for further information.

Questions of academic dishonesty in a particular class are first reviewed by the instructor, who must make a report with recommendations to the Director of the Academic College. Punishment for academic dishonesty will be determined by the instructor, Director, and the Dean of Academic College and may include an "F" grade for the work in question, an "F" grade for the course, academic notice, or dismissal from the University.

### AI (Artificial Intelligence) Statement

Chaminade University recognizes the increasing role of artificial intelligence (AI) technologies in academic and professional environments. AI encompasses, but is not limited to, generative AI platforms, automated writing or content generation software, coding assistants, and similar tools. Students must ensure all submitted work genuinely reflects their knowledge and effort. Using AI to produce or significantly complete graded assignments, exams or other academic tasks – defined as use that substitutes for or substantially replaces a student's own analysis, reasoning or written expression – without explicit instructor approval is considered academic misconduct and will be dealt with according to the University's Academic Honesty Policy.

If an instructor has reasonable grounds to question whether submitted work genuinely reflects a student's own knowledge, authorship, or mastery of course material — or whether it meets the course's expectations for AI use — the instructor may require the student to provide additional or alternative evidence of authorship and content mastery. Such evidence may include drafts, notes, revision history, source materials, process explanations, oral discussion, in class work, or completion of an alternative assessment. A student's refusal or inability to provide such evidence may be considered, along with other available information, in evaluating whether the work meets course requirements and stated learning outcomes. Instructors will not rely solely on AI detection software or other automated tools in making grading or academic integrity determinations. Such determinations will be based on the totality of the available information and handled in accordance with applicable University policies and

procedures. See the catalog section Student Use of Artificial Intelligence in Academic Work for further information.

## **Title IX and Nondiscrimination**

Chaminade University of Honolulu is committed to providing a learning, working and living environment that promotes the dignity of all people, inclusivity and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking. As a member of the University faculty, I am required to immediately report any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator. For pregnant and parenting students, I am also obligated to provide you with similar resources for support and protections available to you. My goal is to make sure that you are aware of the range of options available to you and have access to the resources and support you need. Contact information and reporting options: [chaminade.edu/titleix/nondiscrimination/](https://chaminade.edu/titleix/nondiscrimination/). File a report via the Campus Incident Report Form.

## **Nondiscrimination Policy and Notice of Nondiscrimination**

The university is committed to comply with all State and Federal statutes, rules, and regulations which prohibit discrimination. The university is committed to a policy of nondiscrimination on the basis of race, sex, gender identity and expression, age, religion, color, national origin (including shared ancestry and ethnic characteristics), ancestry, citizenship, disability, genetic information, marital status, breastfeeding, arrest and court record (except as permissible under State law), sexual orientation, or status as a covered veteran. Inquiries about Title IX or general Civil Rights concerns may be referred to the University's Title IX Coordinator, the U.S. Department of Education's Office for Civil Rights, or both and contact information may be found [HERE](#). On-campus Confidential Resources may also be found here at [CAMPUS CONFIDENTIAL RESOURCES](#).

The University's Nondiscrimination Policy and Grievance Procedures can be located on the University webpage at: <https://chaminade.edu/compliance/title-ix-nondiscrimination-policies-procedures/>.

To report information about conduct that may constitute sex discrimination or make a complaint of sex discrimination under Title IX, please refer to the Campus Incident Report form. Chaminade University of Honolulu prohibits sex discrimination in any education program or activity that it operates.

The NOTICE of NONDISCRIMINATION can be found here: [Notice of Nondiscrimination](#).

## **Student with Disabilities Statement — Kōkua 'Ike**

Accessibility Services recognizes disability as a valued aspect of diversity and ensures equal access to the educational environment in accordance with Section 504 of the Rehabilitation Act; the Americans with Disabilities Act, as amended; and the principles and professional standards of the Association on Higher Education and Disability. Access is supported through reasonable accommodations and referrals to campus and community resources.

Appointments with the Accessibility Services Coordinator are available through Stellic at <https://chaminade.stellic.com> and may be held virtually or in person. Drop-in appointments are also welcome.

Students seeking support must meet with the Accessibility Services Coordinator as early as possible, even if they are unsure whether they have appropriate documentation of their disability or its impacts. The Accessibility Services Coordinator prioritizes listening to students's experiences and will discuss any documentation needs during the initial intake meeting. Students may seek support at any time.

Learn more at <https://chaminade.edu/ada-accommodations>

## **Assessment of Student Work**

With the goal of continuing to improve the quality of educational services offered to students, Chaminade University conducts assessments of student achievement of course, program, and institutional learning outcomes. Student work is used anonymously as the basis of these assessments, and the work you do in this course may be used in these assessment efforts.

## Campus Resources & Support Services

The following resources are available to all Chaminade students. Reach out early — these services exist to support your success.

| Resource                                  | Description                                                                                                                                                                                                                                                                                                               | Contact / Website                                              |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Accessibility Services (Kōkua 'Ike)       | Accommodations under Section 504 and ADA. Contact early — appointments via Stellic, virtual or in person.                                                                                                                                                                                                                 | ada@chaminade.edu<br>chaminade.edu/ada-accommodations          |
| Tutoring & Academic Coaching (Kōkua 'Ike) | Tutoring and Academic Coaching Services support students' progression toward their academic, personal, and professional goals with clarity and intention. Services include individualized support in English, math, nursing, sciences, and social sciences, as well as guidance in developing goals and study strategies. | chaminade.edu/tutoring-academic-coaching-services              |
| Career Services                           | Career Services supports students throughout their career journeys. Services include individualized job search strategy coaching, resume reviews, job interview coaching, and access to career-related resources and opportunities.                                                                                       | chaminade.edu/career-services                                  |
| Basic Needs Resources                     | Support for food insecurity, housing instability, and other basic needs.                                                                                                                                                                                                                                                  | chaminade.edu/basic-needs/                                     |
| Title IX / Nondiscrimination              | Reporting and support for sex discrimination and gender-based violence. Campus Incident Report Form available online.                                                                                                                                                                                                     | chaminade.edu/titleix/resources-and-support/                   |
| Hazing Prevention                         | Confidential support, crisis intervention, and reporting for any type of abuse including hazing.                                                                                                                                                                                                                          | hazingpreventionnetwork.org/athlete-helpline/                  |
| Campus Safety / SafeSwords                | Security escort service for anyone who feels unsafe walking alone on campus at any time of day. Call security and a professional will escort you to your destination.                                                                                                                                                     | chaminade.edu/student-life/security/campus-safeswords-program/ |
| CUH Alert Emergency Notification          | Emergency text system. Register your cell number via the Chaminade portal and confirm the text to complete enrollment.                                                                                                                                                                                                    | chaminade.edu                                                  |

## Weekly Laboratory Schedule

*Note: the instructor reserves the right to modify this schedule. Changes will be announced in lab and posted to Canvas. All Canvas deadlines are Hawai'i time. Project discussions close Wednesday at 2:30 pm and PhysioEx quizzes at 3:00 pm; written reports close Sunday at 11:59 pm.*

| Wk of       | Laboratory Session (Wed 2:30–5:20 pm)                                                                   | Project Milestone                                 | Due Dates              |
|-------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------|------------------------|
| 1<br>Aug 19 | Lab orientation and safety;<br>PhysioEx account set-up<br>Introduction to the semester research project | Course and project overview; research groups form | No deadlines this week |

| Wk of        | Laboratory Session (Wed 2:30–5:20 pm)                                                     | Project Milestone                                                | Due Dates                                                                                                                             |
|--------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 2<br>Aug 26  | Wet lab: GI tract histology<br>PhysioEx: Cell Transport Mechanisms and Permeability       | Discussion 1 — Topic Selection and Research Question Formulation | Discussion 1 — Wed Aug 26, 2:30 pm<br>PhysioEx quiz — Wed Aug 26, 3:00 pm<br>GI Tract Histology worksheet — Wed Aug 26, 5:30 pm       |
| 3<br>Sep 2   | Wet lab: Carbohydrate identification<br>PhysioEx: Skeletal Muscle Physiology              | Discussion 2 — Literature Review and Hypothesis Formulation      | Discussion 2 — Wed Sep 2, 2:30 pm<br>PhysioEx quiz — Wed Sep 2, 3:00 pm<br>Carbohydrate Identification worksheet — Wed Sep 2, 5:30 pm |
| 4<br>Sep 9   | PhysioEx: Neurophysiology of Nerve Impulses<br>Experimental design workshop               | Discussion 3 — Experimental Design                               | Discussion 3 — Wed Sep 9, 2:30 pm<br>PhysioEx quiz — Wed Sep 9, 3:00 pm                                                               |
| 5<br>Sep 16  | PhysioEx: Endocrine System Physiology<br>Troubleshooting workshop                         | Discussion 4 — Anticipated Challenges and Troubleshooting        | Discussion 4 — Wed Sep 16, 2:30 pm<br>PhysioEx quiz — Wed Sep 16, 3:00 pm                                                             |
| 6<br>Sep 23  | PhysioEx: Cardiovascular Dynamics<br>Presentation preparation                             | Discussion 5 — Significance and Future Directions                | Discussion 5 — Wed Sep 23, 2:30 pm<br>PhysioEx quiz — Wed Sep 23, 3:00 pm                                                             |
| 7<br>Sep 30  | Group project presentations (in lab)                                                      | Proposal defended; materials list and protocol submitted         | Group Presentation — Wed Sep 30, 2:30 pm<br>Materials Needed — Wed Sep 30, 2:30 pm<br>Protocol — Wed Sep 30, 2:30 pm                  |
| 8<br>Oct 7   | Wet lab: Fetal pig dissection<br>PhysioEx: Cardiovascular Physiology                      | Project data collection begins                                   | PhysioEx quiz — Wed Oct 7, 3:00 pm                                                                                                    |
| —<br>Oct 14  | No lab — Fall Wellness Week (October 12–16)                                               | —                                                                | No deadlines this week                                                                                                                |
| 9<br>Oct 21  | Wet lab: Oral glucose tolerance test<br>PhysioEx: Respiratory System Mechanics            | Project data collection                                          | Pig Dissection report — Sun Oct 18<br>PhysioEx quiz — Wed Oct 21, 3:00 pm                                                             |
| 10<br>Oct 28 | Wet lab: Urine acid measurement<br>PhysioEx: Chemical and Physical Processes of Digestion | Project data collection                                          | Oral Glucose Tolerance Test report — Sun Oct 25<br>PhysioEx quiz — Wed Oct 28, 3:00 pm                                                |

| <b>Wk of</b>       | <b>Laboratory Session (Wed 2:30–5:20 pm)</b>                        | <b>Project Milestone</b>                                                | <b>Due Dates</b>                                                                                       |
|--------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| 11<br>Nov 4        | PhysioEx: Renal System Physiology<br>Project data analysis workshop | Project data analysis                                                   | Urine Acid Measurement report — Sun Nov 1<br>PhysioEx quiz — Wed Nov 4, 3:00 pm                        |
| 12<br>Nov 11       | No lab — Veterans Day                                               | Final report: Introduction drafted                                      | Introduction — Sun Nov 8                                                                               |
| 13<br>Nov 18       | PhysioEx: Acid–Base Balance<br>Data analysis workshop               | Final report: Materials and Methods drafted                             | Materials and Methods — Sun Nov 15<br>PhysioEx quiz — Wed Nov 18, 3:00 pm                              |
| 14<br>Nov 25       | PhysioEx: Blood Analysis<br>Results workshop (figures and tables)   | Final report: Results drafted                                           | Results — Sun Nov 22<br>PhysioEx quiz — Wed Nov 25, 3:00 pm                                            |
| 15<br>Dec 2        | PhysioEx: Serological Testing<br>Final paper workshop               | Final report: Discussion drafted; sections revised into the final paper | Discussion — Sun Nov 29<br>PhysioEx quiz — Wed Dec 2, 3:00 pm<br>Last day of instruction: Friday Dec 4 |
| Finals<br>Dec 7–11 | No laboratory final examination                                     | Final paper submitted                                                   | FINAL PAPER — Sun Dec 6                                                                                |