KPU | KWANTLEN POLYTECHNIC UNIVERSITY
Faculty of Science

mailing address
12666 72 Ave. Surrey, BC
V3W 2M8 Canada
kpu.ca

FACULTY COUNCIL

Tuesday, February 18, 2025
Microsoft Teams Meeting (Online)
4:15 PM – 6:15 PM

AGENDA

1. Additions/Approval of Agenda
2. Approval of Previous Meeting Minutes
3. Business Arising from the Minutes?
4. Chair's Report – (Allyson Rozell)
5. Dean's Report – (Amy Jeon)
6. Senate Report – (Fergal Callaghan)
   - 6.1. Standing Committee on Program Review – (Fergal Callaghan)
   - 6.2. Standing Committee on University Budget – (Fergal Callaghan)
   - 6.3. Standing Committee on Academic Planning and Priorities – (Allyson Rozell)
   - 6.4. Standing Committee on Curriculum – (Richard Popoff)
   - 6.5. Standing Committee on Research – (Paul Adams)
   - 6.6. Standing Committee on Teaching and Learning – (Catherine Chow)
7. Science Committee Reports
   - 7.1. Curriculum – (Richard Popoff)

     Course Revision
     - BIOL 1160: Anatomy and Physiology I (Nick Inglis/Michael Kiraly)
     - BIOL 1260: Anatomy and Physiology II (Nick Inglis/Michael Kiraly)

     New Course
     - BIOL 1170: Human Anatomy and Physiology I (Nick Inglis/Michael Kiraly)
     - BIOL 1270: Human Anatomy and Physiology II (Nick Inglis/Michael Kiraly)

   - 7.2. Academic Planning and Priorities – (Allyson Rozell)
   - 7.3. Research – (Mike Bomford)
   - 7.4. Nominations and Governance – (Michael Coombes)
8. Guest:

Research on students with disabilities and academic accommodation – Fiona Whittington-Walsh

Date of next meeting: March 18, 2025

KWANTLEN POLYTECHNIC UNIVERSITY
Faculty of Science

mailing address
12666 72 Ave. Surrey, BC
V3W 2M8 Canada
kpu.ca

FACULTY COUNCIL

Tuesday, January 21, 2025
Microsoft Teams Meeting (Online)
4:15 PM – 6:15 PM

Meeting Minutes

Attendees:
Amy Jeon; *Dean*
Jeff Dyck; *Assoc. Dean*
Leila Biu; *Recording*
Allyson Rozell; *Chair*
Casey McConill
Catherine Chow
Christina Iggulden
David Sud
Dominic Bernard
Ellen Pond
Fergal Callaghan
Jane Shin
Korri Thorlacius
Mary Hosseinyazdi
Melissa Drury
Muskandeep Kaur
Nadia Henwood
Samaneh Ghanzafari Hashemi
Tara Immell
Tyron Tsui
Xavier Ardez

Regrets:
Alan Davis
Erika Eliason; *Assoc. Dean*
Mike Coombes; *Vice-Chair*
Alex Lyon
Kelsie Doering
Michelle Ikoma
Nicole Tunbridge
Russ Lyons
Sepideh Tahriri Abadi
Suellen Zhou

KPU | KWANTLEN POLYTECHNIC UNIVERSITY
Faculty of Science

mailing address
12666 72 Ave. Surrey, BC
V3W 2M8 Canada
kpu.ca

1. **Approval of the Agenda of January 21, 2025**

   *It was **moved*** (Catherine Chow), ***seconded*** (David Sud)***, and carried THAT*** *the agenda be approved as corrected.*

2. **Approval of the Faculty Council Minutes of November 19, 2024**

   *It was **moved*** (Mary Hosseinyazdi), ***seconded*** (Jane Shin)***, and carried THAT*** *the agenda be approved as distributed.*

3. **Approval of the Faculty Council Report of December 17, 2024**
   *It was **moved*** (Mary Hosseinyazdi), ***seconded*** (Catherine Chow)***, and carried THAT*** *the agenda be approved as distributed*

4. **Business Arising:**
   - None arising

5. **Chair's Report:**
   - Arts Double Minor has passed Senate Standing Committee on Curriculum and will go to Senate next week

6. **Dean's Report:**
   - Spring stable enrolment date was on January 20, 2025. The report from Dr. Lori McElroy was sent to the Science distribution list.
     - 39,929 seats were filled for Spring 2025, 6,550 seats fewer than Spring 2024. There was a decrease of 1% in the fill rate.
     - For Science, 3,950 seats out of 6,458 were filled for Spring 2024. For Spring 2025, 3,950 seats out of 6,439 seats were filled. The fill rate for Spring 2024 was 61.16%, while the fill rate for Spring 2025 is 61.38%.
     - International headcounts decreased by 34%, with new international students decreasing by around 70%
     - The data is available on the OPA dashboard
   - There will be an intake cancellation for CADD starting in Spring 2026. We will only offer one intake a year, during the Fall semester.
   - Convocation will be on Thursday, February 27.

7. **Senate Reports:**
   - No report

7.1. Senate Standing Committee on Program Review (SSCPR):
   - No report

7.2. Senate Standing Committee on University Budget (SSCUB):
   - The budget meeting has been postponed to the middle of February to give the budget developers time to get more information on enrollments and to make better predictions for the upcoming year.

mailing address
12666 72 Ave. Surrey, BC
V3W 2M8 Canada
kpu.ca

7.3. Senate Standing Committee on Academic Planning and Priorities (SSCAPP):

- Master in Operation and Supply Chain Management stage 1 review and stage 2 full program proposal

7.4. Senate Standing Committee on Curriculum (SSCC):

- No report

7.5. Senate Standing Committee on Research (SSCR):

- No report

7.6. Senate Standing Committee on Teaching and Learning (SSCTL):

- No report

7.7. Senate Standing Committee on Policy (SSCP):

- No report

8. Committee Reports

8.1. Curriculum Committee:

- **MOTION:** THAT the Faculty Council approves the proposed new courses in Physics.

  - PHYS 1500: Science with AI: Methods and Applications (Kianoosh Tahani)
  - PHYS 3800: Introduction to Data Science & Machine Learning Techniques (Kianoosh Tahani)

  Faculty Council approves the proposed new courses in Physics.

- **MOTION:** THAT the Faculty Council approves the proposed Micro Credentials in Brewing and Brewery Operations.

  - Micro Credential in Beer Sensory (Dominic Bernard)
  - Micro Credential in the Business of Brewing (Dominic Bernard)
  - Micro Credential in the Science of Brewing (Dominic Bernard)
  - Micro Credential in Brewing (Dominic Bernard)

  Faculty Council approves the proposed Micro Credentials in Brewing and Brewery Operations

mailing address
12666 72 Ave. Surrey, BC
V3W 2M8 Canada
kpu.ca

- **MOTION:** THAT the Faculty Council approves the program change request in Biology and Health Science.

  - Bachelor of Science, Major in Biology (Layne Myhre)
  - Bachelor of Science, Major in Health Science (Layne Myhre)
  - Bachelor of Science (Honours), Major in Biology (Layne Myhre)
  - Bachelor of Science (Honours), Major in Health Science (Layne Myhre)

  Faculty Council approves the program change request in Biology and Health Science

8.2. Academic Planning and Priorities:

- No report

8.3. Research:

- No report

8.4. Nominations and Governance:

- No report

9. New Business:

- Policy AC16

  - **MOTION**: That Faculty of Science Faculty Council call upon Senate to hold a referendum of KPU faculty on adopting Policy AC16.

    It was **moved** (Casey McConill), **seconded** (Mary Hosseinyazdi), **and carried THAT** the motion be approved by faculty council

    Motion failed to pass.

Meeting adjourned by Chair at 5:17 PM

Date of next Faculty Council: February 18, 2025

1ST YEAR ANATOMY AND PHYSIOLOGY CHANGES

In Workflow

1. Biology Chair (nicole.tunbridge@kpu.ca;cayley.velazquez@kpu.ca;mikael.mokkonen@kpu.ca)
2. ST Dean (Amy.Jeon@kpu.ca)
3. Nick Inglis (Nick.Inglis@kpu.ca)
4. OPA (opa@kpu.ca)
5. Finance (accounts.receivable@kpu.ca)
6. ORegCurrConsult (oregcurrconsult@kpu.ca)
7. ST Curriculum Committee (richard.popoff@kpu.ca)
8. ST Council (Allyson.Rozell@kpu.ca; Amy.Jeon@kpu.ca)
9. Senate Standing Committee on Curriculum (Catherine.Schwichtenberg@kpu.ca; Michelle.Molnar@kpu.ca)
10. Senate (Catherine.Schwichtenberg@kpu.ca)
11. OReg-Courses (Course.Outlines@kpu.ca)
12. Banner (Course.Outlines@kpu.ca)

Approval Path

1. Fri, 06 Dec 2024 01:08:14 GMT
   Nicole Tunbridge (Nicole.Tunbridge): Approved for Biology Chair
2. Mon, 09 Dec 2024 23:25:34 GMT
   Amy Jeon (Amy.Jeon): Approved for ST Dean
3. Tue, 10 Dec 2024 17:45:20 GMT
   Norwinda Binuya-Barros (Norwinda.Binuya-Barros): Approved for OPA
4. Thu, 12 Dec 2024 19:23:18 GMT
   Ana Silva (Ana.Silva): Approved for Finance
5. Fri, 03 Jan 2025 17:12:35 GMT
   Krista Gerlich-Fitzgerald (krista.gerlichfitzgerald): Rollback to ST Dean for ORegCurrConsult
6. Thu, 09 Jan 2025 18:18:09 GMT
   Amy Jeon (Amy.Jeon): Approved for ST Dean
7. Fri, 10 Jan 2025 18:14:26 GMT
   Nick Inglis (Nick.Inglis): Approved for 100047697
8. Fri, 10 Jan 2025 19:41:47 GMT
   Norwinda Binuya-Barros (Norwinda.Binuya-Barros): Approved for OPA
9. Tue, 14 Jan 2025 18:51:03 GMT
   Ana Silva (Ana.Silva): Approved for Finance
10. Thu, 16 Jan 2025 00:33:25 GMT
    Krista Gerlich-Fitzgerald (krista.gerlichfitzgerald): Approved for ORegCurrConsult
11. Mon, 10 Feb 2025 18:47:48 GMT
    Richard Popoff (Richard.Popoff): Approved for ST Curriculum Committee

History

1. Jun 16, 2023 by Ashley Allison (ashley.allison)

1st year Anatomy and Physiology changes

Course

- BIOL 1160: Anatomy and Physiology I
- BIOL 1170: Human Anatomy and Physiology I
- BIOL 1260: Anatomy and Physiology II
- BIOL 1270: Human Anatomy and Physiology II

Date Submitted: Thu, 05 Dec 2024 21:19:28 GMT

Viewing: BIOL 1160 : Anatomy and Physiology I
Last approved: Fri, 16 Jun 2023 03:01:29 GMT
Last edit: Wed, 15 Jan 2025 17:28:48 GMT

Changes proposed by: Nick Inglis (100047697)

Reviewer Comments

Krista Gerlich-Fitzgerald (krista.gerlichfitzgerald) (Thu, 16 Jan 2025 00:33:15 GMT): It is recommended that a more specific course title and description are used to differentiate the courses. As the courses will be listed in the calendar back to back, a little more difference could support students deciding which to take. NOTE: Should pre-req changes be also included for HSCI 3215, 3225, 4140 to allow BIOL 1170 and BIOL 1270 to be seen as an option for pre-req (note in the background students will satisfy the requirement however, should it be visible for all students to see either are options?) Lastly: cert HEAL, BPN and BSN require program changes as a result of this change

Academic Level

Undergraduate (UG)

Faculty

Science

Department

Biology

Implementation Date

Fall 2025

Subject Code

BIOL - Biology

Course Number

1160

Descriptive Title

Anatomy and Physiology I

Short Title

Anatomy and Physiology I

CIP Code

260901 - Physiology, general

Fee Category 2.a.1?

Yes

Calendar Description

Students will explore the foundational concepts of human anatomy and physiology through hands-on learning, focusing on the integumentary, nervous, endocrine, skeletal, muscular, and cardiovascular systems. Emphasis is placed on practical application and experiential learning in a laboratory setting to reinforce theoretical knowledge.

Suggested Credit Hours

4

Credits

0-4

Suggested Classroom Hours

4

Lecture Hours

0-4

Suggested Lab Hours

3

Lab Hours

0-3

Contact Hours

0-7

Is this course repeatable for additional credit?

No

Credit-exclusion Courses

BIOL 1170 - Human Anatomy and Physiology I

Prerequisites

Either (a) BIOL 1110; or (b) both (i) Biology 12 (B) or Anatomy and Physiology 12 (B) or BIOQ 1099 (B), and (ii) Chemistry 11 (B) or Chemistry 12 (B) or CHEQ 1094 (B); or (c) active registration with the College of Licensed Practical Nurses of British Columbia.

Schedule Types

Schedule Type
Class
Lab
Class/Lab

Course Attributes

Degree Requirement Attributes

Quantitative

Course Registration Restrictions

Include Undergraduate

Course Learning Outcomes

	A student who successfully completes the course will have reliably demonstrated the ability to:
1	Apply anatomical terminology through lectures and hands-on laboratory activities, including dissections and model examinations.
2	Investigate the properties of biological macromolecules and cellular processes, such as osmosis, through laboratory experiments and microscopy.
3	Use microscopes and histological techniques to identify the structure and function of cells and tissues, relating this information to organs and organ systems.
4	Analyze the structural components and functions of the integumentary, nervous, endocrine, skeletal, muscular, and cardiovascular systems through lectures, dissection, microscopy, and model-based learning.
5	Explain how the nervous and endocrine systems control selected activities of the other organ systems through feedback activities
6	Integrate theoretical knowledge with practical skills to explore the interrelationships between the structures and functions of the body’s organ systems.

Content will include, but is not restricted to, the following:

1. Anatomical terminology and key themes
Lecture:
· Body cavities
· Fluid compartments
· Homeostasis
· Feedback systems
Lab:
· Fetal pig dissection

· Serous membranes
· Directional terminology
· Regional terminology

2. Introduction to Biochemistry
Lecture:
· Proteins and enzymes
· Carbohydrates
· Lipids
Lab:
· Analysis of osmosis in red blood cells
· Training on how to properly use a microscope

Introduction to cells and tissues
Lecture:
· Cell membrane structure and function
· Membrane transport
· Organelles
· The skin and accessory structures
Lab:
· Microscopy of epithelial, muscular, nervous and connective tissues

3. The nervous and endocrine systems
Lecture:
· Nervous tissue and action potentials
· Peripheral nervous system
· Central nervous system
· Sensory and motor pathways pathways
· Endocrine organs
· Hormones and endocrine signalling
Lab:
· Microscopy of nervous tissue
· Brain dissection
· Reflex arc pathways
· Eyeball dissection

4. The muscular and skeletal systems
Lecture:
· Cartilage and bone tissue
· The skeletal system
· Muscle tissue
· Skeletal muscle
· Joints and movement
Lab:
· Examining skeleton models
· Microscopy of bone and muscle tissue
· Examining muscle system models

5. The cardiovascular system
Lecture:
· Blood components
· Structure and function of blood vessels
· Blood pressure and circulation
· Structure and function of the heart
· Regulation of cardiac function
· Lymphatic system
Lab:
· Microscopy of blood cells
· Heart dissection

Course Learning Activities

Learning activities should be appropriately related to learning outcomes. Activities may include, but are not restricted to, the following:
Attending class and taking notes
Participating in class discussions in a laboratory setting
Performing basic laboratory experiments
Reading and analyzing written material in textbooks and other resources to complete course objectives
Gathering information related to the course objectives from computer software and laboratory demonstrations, models and experiments
Using the library and other audio-visual resources to complete course objectives
Reading, studying and completing course objectives outside of class time

Assessment

Assessment plans comply with KPU policy and may resemble the following:

Add the details about 1 assessment prior to W date, note that an assessment can evaluate multiple LO, ensure that each LO has been evaluated, should have multi modes of assessment (not all exam based for example)

Assessment Type 1
Exams (at least 2) (40-60%)
Type 1 Value
50

Assessment Type 2
Quizzes (10-30%)
Type 2 Value
20

Assessment Type 3
Activities/assignments (5-15%)
Type 3 Value
10

Assessment Type 4
Laboratory quizzes/assignments/exam (15-30%)
Type 4 Value
20

TOTAL
100

Additional Notes
No single assessment will be worth more than 30% of the final grade.

Grading System - default
Letter Grades (N)

Alternate Grading System(s) - not default
Not Gradable (0)

Methods for Prior Learning Assessment
Challenge Exam
Demonstration
Interview

Required Learning Resources

OpenStax College. (2022). Anatomy & Physiology. OpenStax. http://cnx.org/content/col11496/latest/
Kwantlen Polytechnic University. Biology Modules: BIOL 1160. Langley, BC: Kwantlen Polytechnic University. Latest Edition.

Open Educational Resources (OER)

OpenStax College. (2022). Anatomy & Physiology. OpenStax. http://cnx.org/content/col11496/latest/

Does this course require the use of animals?

No

Do library resources in this area need more development?

No

Is this course externally accredited?

No

Course Developer(s)

Amy Jeon;

Course Reviser(s)

Nick Inglis; Michael Kiraly

Date for Next Review

2025-09-01

Key: 828

1st year Anatomy and Physiology changes

Course

- BIOL 1160: Anatomy and Physiology I
- BIOL 1170: Human Anatomy and Physiology I
- BIOL 1260: Anatomy and Physiology II
- BIOL 1270: Human Anatomy and Physiology II

Date Submitted: 12/05/24 1:19 pm

Viewing: BIOL 1160 : Anatomy and Physiology I

Last approved: 06/15/23 8:01 pm

Last edit: 01/15/25 9:28 am

Changes proposed by: Nick Inglis (100047697)

Calendar Pages referencing this course

Associate of Arts Degree Framework
Biology
Biology(BIOL)
Courses A-Z

Programs referencing this course

CR_HC_HEAL: Certificate in Health Foundations
BPN_HC_NRPN: Bachelor of Psychiatric Nursing
BSN_HC_NRSG: Bachelor of Science in Nursing

Other Courses referencing this course

In The Catalog

Prerequisites:

In Workflow

1. **Biology Chair**
2. **ST Dean**
3. **Nick Inglis**
4. **OPA**
5. **Finance**
6. **ORegCurrConsul**
7. **ST Curriculum Committee**
8. **ST Council**
9. Senate Standing Committee on Curriculum
10. Senate
11. OReg-Courses
12. Banner

Approval Path

1. 12/05/24 5:08 pm Nicole Tunbridge (Nicole.Tunbridge) Approved for Biology Chair
2. 12/09/24 3:25 pm Amy Jeon (Amy.Jeon): Approved for ST Dean
3. 12/10/24 9:45 am Norwinda Binuya-Barros (Norwinda.Binuya-Barros): Approved for OPA
4. 12/12/24 11:23 am Ana Silva (Ana.Silva): Approved for Finance

BIOL 1260 : Anatomy and Physiology II
BIOL 1270 : Human Anatomy and Physiology II
HSCI 3215 : Complementary Medicine
HSCI 3225 : Nutrition
HSCI 4140 : Health and Aging
NRSG 1241 : Nursing Practice 2

Reviewer Comments

5. 01/03/25 9:12 am Krista Gerlich-Fitzgerald (krista.gerlichfitzge Rollback to ST Dean for ORegCurrConsult
6. 01/09/25 10:18 am Amy Jeon (Amy.Jeon): Approved for ST Dean
7. 01/10/25 10:14 am Nick Inglis (Nick.Inglis): Approved for 100047697
8. 01/10/25 11:41 am Norwinda Binuya-Barros (Norwinda.Binuya-Barros): Approved for OPA
9. 01/14/25 10:51 am Ana Silva (Ana.Silva): Approved for Finance
10. 01/15/25 4:33 pm Krista Gerlich-Fitzgerald (krista.gerlichfitzge Approved for ORegCurrConsult
11. 02/10/25 10:47 am Richard Popoff (Richard.Popoff): Approved for ST

Curriculum Committee

History

1. Jun 16, 2023 by Ashley Allison (ashley.allison)

Krista Gerlich-Fitzgerald (krista.gerlichfitzgerald) (01/15/25 4:33 pm): It is recommended that a more specific course title and description are used to differentiate the courses. As the courses will be listed in the calendar back to back, a little more difference could support students deciding which to take. NOTE: Should pre-req changes be also included for HSCI 3215, 3225, 4140 to allow BIOL 1170 and BIOL 1270 to be seen as an option for pre-req (note in the background students will satisfy the requirement however, should it be visible for all students to see either are options?) Lastly: cert HEAL, BPN and BSN require program changes as a result of this change

Academic Level	Undergraduate (UG)
Faculty	Science
Department	Biology
Implementation Date	Fall 2025
Subject Code	BIOL - Biology
Course Number	1160
Descriptive Title	Anatomy and Physiology I
Short Title	Anatomy and Physiology I
CIP Code	260901 - Physiology, general
Fee Category 2.a.1?	Yes
Differential Fee Category?	

Calendar Description

Students will explore ~~study~~ the foundational concepts ~~major organ systems~~ of ~~the~~ human anatomy ~~body responsible for support, movement, circulation, respiration~~ and

physiology through hands-on learning, focusing on the integumentary, nervous, endocrine, skeletal, muscular, and cardiovascular systems. ~~digestion.~~ Emphasis is placed on practical application and experiential learning in a laboratory setting to reinforce theoretical knowledge. ~~They will also overview nervous and endocrine control, and microbiology.Students will study these topics using a student-centred laboratory format.~~

Suggested Credit Hours	4	Credits	0-4
Suggested Classroom Hours	4	Lecture Hours	0-4
Suggested Lab Hours	3	Lab Hours	0-3 ~~0-2~~
Suggested Other Hours (Clinical, Practicum, etc)		Other Hours	~~0-3~~
Total Contact Hours		Contact Hours	0-7 ~~0-9~~

Is this course repeatable for additional credit?	No
Cross-listed Courses	
Equivalent Courses	
Credit-exclusion Courses	BIOL 1170 - Human Anatomy and Physiology I
Optional Calendar Description Note	

Prerequisites

Either (a) BIOL 1110; ~~1110~~ or (b) both (i) Biology 12 (B) or Anatomy and Physiology 12 (B) or BIOQ 1099 (B), and (ii) Chemistry 11 (B) or Chemistry 12 (B) or CHEQ 1094 (B); or (c) active registration with the College of Licensed Practical Nurses of British Columbia. ~~(B).~~

Corequisites

Schedule Types

Schedule Type
Class
Lab
Class/Lab

Course Attributes

Pathway to Undergraduate Studies	
Degree Requirement Attributes	Quantitative
Suggested Registration Restrictions	
Course Registration Restrictions	Include Undergraduate

Course Learning Outcomes

	A student who successfully completes the course will have reliably demonstrated the ability to:
1	Apply anatomical terminology through lectures and hands-on laboratory activities, including dissections and model examinations. ~~Acquire the information to develop a basic understanding of the structural organization and specified functions of the body as an integrated whole~~
2	Investigate ~~Describe~~ the properties of biological macromolecules ~~basic structure~~ and cellular processes, such as osmosis, through laboratory experiments ~~function of cells~~ and microscopy. ~~tissues and relate this information to the structure and function of the organs and organ systems of the body~~
3	Use microscopes ~~Describe the location, structural components~~ and histological techniques to identify the structure and function of cells and tissues, relating this information to organs and organ systems. ~~the following systems: integumentary system, nervous system, endocrine system,~~

	A student who successfully completes the course will have reliably demonstrated the ability to:
	~~muscular system, skeletal system, circulatory system, respiratory system, and digestive system~~
4	Analyze ~~Describe~~ the structural ~~body fluid compartments and fluid~~ components and functions of the integumentary, nervous, endocrine, skeletal, muscular, and cardiovascular systems through lectures, dissection, microscopy, ~~relate these to selected physiological events, for example, nerve impulse~~ and model-based learning. ~~fluid balance~~
5	Explain how the nervous ~~interrelationship between the respiratory system~~ and endocrine systems control selected activities ~~circulatory system in terms~~ of the other organ systems through feedback activities ~~maintenance of cellular respiration in all tissues~~
6	Integrate theoretical knowledge with practical skills to explore ~~Explain~~ the interrelationships ~~interrelationship~~ between the structures ~~digestive system~~ and functions ~~circulatory system in terms~~ of the body's organ systems. ~~tissue demand for nutrients~~
~~7~~	~~Explain how the nervous and endocrine systems control selected activities of the other organ systems through feedback activities~~
~~8~~	~~Provide examples, within selected organ systems, of the mechanism(s) for growth and development and the impact of aging~~
~~9~~	~~Relate nutrient requirements to proper functioning and development of selected organ systems~~
~~10~~	~~Define and explain the symbiotic relationship between the human body and normal body flora~~
~~11~~	~~Develop time management techniques in a self-directed learning environment~~

Content will include, but is not restricted to, the following:

1. Anatomical terminology and key themes
Lecture:
· Body cavities
· Fluid compartments
· Homeostasis
· Feedback systems
Lab:
· Fetal pig dissection
· Serous membranes
· Directional terminology
· Regional terminology

2. Introduction to Biochemistry
Lecture:
· Proteins and enzymes
· Carbohydrates
· Lipids
Lab: ~~Wall structure and function~~
· Analysis ~~Histology~~ of osmosis in red ~~white~~ blood cells
· Training on how to properly use a microscope

Introduction to cells and ~~· Organs and~~ tissues
Lecture: ~~of the respiratory system (includes spirometry experiment) · Organs and tissue of the digestive system (includes experiment determining the emulsifying properties of bile)~~
~~Theory Component Overview of the Basic Structure of the Human Body~~
~~· Thecell:Structural components · Thecell:Metabolic activities · The body fluids · Movement processes across cell membranes · Tissues, organs and organ systems · Body cavities and regions Overview of the Nervous and Endocrine System · Introduction to the nervous system · Homeostasis~~
~~· The endocrine system The Integumentary System · The skin and body membranes · Normal skin flora The Musculo-Skeletal System · The skeletal system · Movement and skeletal muscles · Movement and "involuntary muscles" The Vascular System, Blood andLymph:The Need for Circulation~~
~~· Theheart:Structure and function · The regulatory process of cardiac function~~
~~· Bloodvessels:Structure and function · Arterial blood pressure and the process of circulation · Blood as a tissue · Lymphatic system The RespiratorySystem:The Need for Oxygen and Elimination of CO2 · Organs of the respiratorysystem:~~· Cell membrane structure ~~Structure~~ and function
· Membrane ~~· The breathing process and its regulation · The process of~~

gaseous exchange and transport
· Organelles
· - The skin and accessory structures
Lab: Digestive System:
· Microscopy of epithelial, muscular, nervous and connective tissues

3. The nervous and endocrine systems
Lecture:
· Nervous tissue and action potentials
· Peripheral nervous system
· Central nervous system
· Sensory and motor pathways pathways
· Endocrine organs
· Hormones and endocrine signalling
Lab:
· Microscopy of nervous tissue
· Brain dissection
· Reflex arc pathways
· Eyeball dissection

4. The muscular and skeletal systems
Lecture:
· Cartilage and bone tissue
· The skeletal system
· Muscle tissue
· Skeletal muscle
· Joints and movement
Lab:
· Examining skeleton models
· Microscopy of bone and muscle tissue
· Examining muscle system models

5. The cardiovascular system
Lecture:
· Blood components
· Structure and function of · Arterial blood vessels
· Blood pressure and circulation
· Structure and function of the heart
· Regulation of cardiac function
· Lymphatic process of circulation · Blood as a tissue · Lymphatic system
Lab: The Respiratory System:
· Microscopy of blood cells
· Heart dissection The Need for Nutrition and Elimination · Organs of the digestive

~~system:Structure and function · Accessory organs of the digestive system:Structure and function · The digestive and eliminative processes and their control · Vomiting and defecation reflex · Ulcers · The absorptive and distribution processes · The utilization processes:Liver and cell metabolism · Diabetes Laboratory Component · The structure of cells and tissues (includes an introduction to the compound microscope) · Directional terms, body cavities and regions (includes fetal pig dissection) · Osmosis across red blood cell membranes · Reflex arc components and the spinal cord · Structural components of the brain · Major bones of the skeleton and histology of compact and spongy bone · Major skeletal muscles, histology and movement at synovial joints · Heart Structure and function (includes heart dissection) · Major blood vessels:Wall structure and function · Histology of white blood cells · Organs and tissues of the respiratory system (includes spirometry experiment) · Organs and tissue of the digestive system (includes experiment determining the emulsifying properties of bile)~~

Course Learning Activities

Learning activities should be appropriately related to learning outcomes. Activities may include, but are not restricted to, the following:
Attending class and taking notes
Participating in class discussions in a laboratory setting
Performing basic laboratory experiments
Reading and analyzing written material in textbooks and other resources to complete course objectives
Gathering information related to the course objectives from computer software and laboratory demonstrations, models and experiments
Using the library and other audio-visual resources to complete course objectives
Reading, studying and completing course objectives outside of class time
~~Orally describing and explaining information gathered in laboratory experiments and demonstration materials as part of weekly evaluation~~

Mastery Criteria

Assessment

Assessment plans comply with KPU policy and may resemble the following:

Add the details about 1 assessment prior to W date, note that an assessment can evaluate multiple LO, ensure that each LO has been evaluated, should have multi modes of assessment (not all exam based for example)

Assessment Type 1	Exams (at least 2) (40-60%) ~~Weekly Evaluations - Weekly written quizzes and weekly oral lab evaluations~~	Type 1 Value	50 ~~30~~
Assessment Type 2	Quizzes (10-30%) ~~Mid-term Examination~~	Type 2 Value	20 ~~35~~
Assessment Type 3	Activities/assignments (5-15%) ~~Final Examination~~	Type 3 Value	10 ~~35~~
Assessment Type 4	Laboratory quizzes/assignments/exam (15-30%)	Type 4 Value	20
Assessment Type 5		Type 5 Value	
Assessment Type 6		Type 6 Value	
Assessment Type 7		Type 7 Value	
		TOTAL	100

Additional Notes

No single assessment will be worth more than 30% of the final grade. ~~Exams have historically been assessed at 35%.~~

Attach Learning contribution rubric	
Grading System - default	Letter Grades (N)
Alternate Grading System(s) - not default	Not Gradable (0)

Methods for Prior Learning Assessment	Challenge Exam Demonstration Interview

Required Learning Resources

OpenStax College. (2022). ~~Principles of Tortora,G.J.&B.Derrickson.~~Anatomy & ~~and~~ Physiology. OpenStax. http://cnx.org/content/col11496/latest/

Kwantlen Polytechnic University. ~~New York,NY:Wiley &Sons.LatestEdition.Kwantlen PolytechnicUniversity.~~Biology Modules: BIOL 1160. Langley, BC: Kwantlen Polytechnic University. Latest Edition. ~~Kwantlen Polytechnic University.Latest Edition.~~

Recommended Learning Resources

Other Course Materials

Open Educational Resources (OER)

OpenStax College. (2022). Anatomy & Physiology. OpenStax. http://cnx.org/content/col11496/latest/ ~~Anatomy and Physiology (OpenStax) by J.Gordon Betts, Tyler Junior College, Eddie Johnson, Central Oregon Community College, James A.Wise, Hampton University, Kelly A.Young, California State University, Long Beach, et al.~~

Does this course require the use of animals?	No	
Do library resources in this area need more development?	No	If yes, then list details
Is this course externally accredited?	No	
External Accrediting Body		

Request for Quantitative Course Attribute

Please summarize the course content and the rationale behind the QUAN attribute request.

Select which Quantitative Criteria this course meets (include at least 2).

Attach Supporting Documents

Course Developer(s)	Amy Jeon;
Course Reviser(s)	Nick Inglis; Michael Kiraly ~~Amy Jeon;~~
Date for Next Review	2025-09-01

Key: 828

Viewing: BIOL 1260 : Anatomy and Physiology II
Last approved: Fri, 07 Jul 2023 03:01:30 GMT
Last edit: Wed, 15 Jan 2025 17:31:46 GMT

Changes proposed by: Nick Inglis (100047697)

Reviewer Comments

Krista Gerlich-Fitzgerald (krista.gerlichfitzgerald) (Thu, 16 Jan 2025 00:33:15 GMT): It is recommended that a more specific course title and description are used to differentiate the courses. As the courses will be listed in the calendar back to back, a little more difference could support students deciding which to take. NOTE: Should pre-req changes be also included for HSCI 3215, 3225, 4140 to allow BIOL 1170 and BIOL 1270 to be seen as an option for pre-req (note in the background students will satisfy the requirement however, should it be visible for all students to see either are options?) Lastly: cert HEAL, BPN and BSN require program changes as a result of this change

Academic Level

Undergraduate (UG)

Faculty

Science

Department

Biology

Implementation Date

Fall 2025

Subject Code

BIOL - Biology

Course Number

1260

Descriptive Title

Anatomy and Physiology II

Short Title

Anatomy and Physiology II

CIP Code

260901 - Physiology, general

Fee Category 2.a.1?

Yes

Calendar Description

Students will explore the foundational concepts of human anatomy and physiology through hands-on learning, focusing on the respiratory, digestive, urinary, and reproductive systems. Emphasis is placed on practical application and experiential learning in a laboratory setting to reinforce theoretical knowledge.

Suggested Credit Hours

4

Credits

0-4

Suggested Classroom Hours

4

Lecture Hours

0-4

Suggested Lab Hours
3
Lab Hours
0-3

Contact Hours
0-7

Is this course repeatable for additional credit?
No

Credit-exclusion Courses
BIOL 1270 - Human Anatomy and Physiology II

Prerequisites
BIOL 1160

Schedule Types

Schedule Type
Class
Lab
Class/Lab

Course Attributes

Degree Requirement Attributes
Quantitative

Course Registration Restrictions
Include Undergraduate

Course Learning Outcomes

	A student who successfully completes the course will have reliably demonstrated the ability to:
1	Use lecture content, anatomical models and laboratory techniques to identify and analyze the structures and functions of the respiratory, digestive, urinary, immune, and reproductive systems.
2	Apply lecture content and microbiological techniques, including culturing and microscopy, to study microorganisms and their role in health and disease.
3	Identify immune system components and stages of infection through lectures and hands-on activities.
4	Describe the role of the nervous and/or endocrine systems in regulating the aforementioned body systems.
5	Relate theoretical knowledge of physiological systems to practical applications, emphasizing the integration of structure and function through laboratory-based inquiry and experimentation.

Content will include, but is not restricted to, the following:

1. The respiratory system
Lecture:
· Organs of the respiratory system
· Gas exchange
· Neuronal regulation of the respiratory system
Lab
· Spirometry
· Examining models of the respiratory tract

2. The digestive system
Lecture:
· Organs of the digestive system
· Mechanical and chemical digestion

· Motility
· Nutrient absorption
· Neuronal and endocrine control of the digestive system
Lab:
· Examining models of the digestive system
· Carry out experiments examining the chemical basis for digestion

3. The urinary system
Lecture:
· Organs of the urinary system
· The nephron and glomerular filtration, tubular reabsorption and tubular secretion
· Urine
· Endocrine control of the urinary system
· Fluid, electrolyte and pH balance
Lab:
· Examining models of the urinary system, particularly the kidney
· Kidney dissection
· Experiment to examine the association between carbon dioxide and pH
· Urinalysis

4. Microbiology and immunity
Lecture:
· Bacteria and viruses
· Stages of infection
· Portals of entry and exit
· Innate immunity
· Adaptive immunity
Lab:
· Blood typing
· Microscopy of white blood cells
· Environmental sampling of microbes
· Culturing microorganisms

5. Reproductive system
Lecture:
· Male reproductive anatomy and physiology
· Female reproductive anatomy and physiology
· Hormonal regulation of male and female reproductive systems
· Fertilization
· Embryonic development
· Fetal development
· Pregnancy and birth
Lab:
· Examining models of the male and female reproductive systems
· Examining models of the embryo/fetus at various stages of pregnancy

Course Learning Activities

Learning activities should be appropriately related to learning outcomes. Activities may include, but are not restricted to, the following:
Attending class and taking notes
Participating in class discussions
Performing basic laboratory experiments
Reading and analyzing written material in textbooks and articles to complete course objectives
Gathering information related to the course objectives from computer software and laboratory demonstrations, models and experiments
Using the library and other audio-visual resources to complete course objectives
Reading, studying and completing course objectives outside of class time

Assessment

Assessment plans comply with KPU policy and may resemble the following:

Add the details about 1 assessment prior to W date, note that an assessment can evaluate multiple LO, ensure that each LO has been evaluated, should have multi modes of assessment (not all exam based for example)

Assessment Type 1
Exams (at least 2) (40-60%)
Type 1 Value
50

Assessment Type 2
Quizzes (10-30%)
Type 2 Value
20

Assessment Type 3
Activities/assignments (5-15%)
Type 3 Value
10

Assessment Type 4
Laboratory quizzes/assignments/exam (15-30%)
Type 4 Value
20

TOTAL
100

Additional Notes
No single assessment will be worth more than 30% of the final grade.

Grading System - default
Letter Grades (N)

Alternate Grading System(s) - not default
Not Gradable (0)

Methods for Prior Learning Assessment
Challenge Exam
Demonstration
Interview

Required Learning Resources
OpenStax College. (2022). Anatomy & Physiology. OpenStax. http://cnx.org/content/col11496/latest/
Kwantlen Polytechnic University. Biology Modules: BIOL 1260 (2 modules). Langley, BC: Kwantlen Polytechnic University. Latest Edition.

Open Educational Resources (OER)
OpenStax College. (2022). Anatomy & Physiology. OpenStax. http://cnx.org/content/col11496/latest/

Does this course require the use of animals?
No

Do library resources in this area need more development?
No

Is this course externally accredited?
No

Course Reviser(s)
Nick Inglis; Michael Kiraly

Date for Next Review
2030-09-01

Key: 831

1st year Anatomy and Physiology changes

Course

- BIOL 1160: Anatomy and Physiology I
- BIOL 1170: Human Anatomy and Physiology I
- BIOL 1260: Anatomy and Physiology II
- BIOL 1270: Human Anatomy and Physiology II

Date Submitted: 12/05/24 1:19 pm

Viewing: BIOL 1260 : Anatomy and Physiology II

Last approved: 07/06/23 8:01 pm

Last edit: 01/15/25 9:31 am

Changes proposed by: Nick Inglis (100047697)

Calendar Pages referencing this course

Biology
Biology(BIOL)
Courses A-Z

Programs referencing this course

CR_HC_HEAL: Certificate in Health Foundations
BPN_HC_NRPN: Bachelor of Psychiatric Nursing
BSN_HC_NRSG: Bachelor of Science in Nursing

Other Courses referencing this course

As A Banner Corequisite:

NRSG 1241 : Nursing Practice 2

In Workflow

1. **Biology Chair**
2. **ST Dean**
3. **Nick Inglis**
4. **OPA**
5. **Finance**
6. **ORegCurrConsul**
7. **ST Curriculum Committee**
8. **ST Council**
9. Senate Standing Committee on Curriculum
10. Senate
11. OReg-Courses
12. Banner

Approval Path

1. 12/05/24 5:08 pm Nicole Tunbridge (Nicole.Tunbridge) Approved for Biology Chair
2. 12/09/24 3:25 pm Amy Jeon (Amy.Jeon): Approved for ST Dean
3. 12/10/24 9:45 am Norwinda Binuya-Barros (Norwinda.Binuya-Barros): Approved for OPA
4. 12/12/24 11:23 am Ana Silva (Ana.Silva): Approved for Finance

In The Catalog

Prerequisites:

HSCI 3215 : Complementary Medicine

Reviewer Comments

5. 01/03/25 9:12 am Krista Gerlich-Fitzgerald (krista.gerlichfitzge Rollback to ST Dean for ORegCurrConsult
6. 01/09/25 10:18 am Amy Jeon (Amy.Jeon): Approved for ST Dean
7. 01/10/25 10:14 am Nick Inglis (Nick.Inglis): Approved for 100047697
8. 01/10/25 11:41 am Norwinda Binuya-Barros (Norwinda.Binuya-Barros): Approved for OPA
9. 01/14/25 10:51 am Ana Silva (Ana.Silva): Approved for Finance
10. 01/15/25 4:33 pm Krista Gerlich-Fitzgerald (krista.gerlichfitzge Approved for ORegCurrConsult
11. 02/10/25 10:47 am Richard Popoff (Richard.Popoff): Approved for ST

Curriculum Committee

History

1. Jul 7, 2023 by Ashley Allison (ashley.allison)

Krista Gerlich-Fitzgerald (krista.gerlichfitzgerald) (01/15/25 4:33 pm): It is recommended that a more specific course title and description are used to differentiate the courses. As the courses will be listed in the calendar back to back, a little more difference could support students deciding which to take. NOTE: Should pre-req changes be also included for HSCI 3215, 3225, 4140 to allow BIOL 1170 and BIOL 1270 to be seen as an option for pre-req (note in the background students will satisfy the requirement however, should it be visible for all students to see either are options?) Lastly: cert HEAL, BPN and BSN require program changes as a result of this change

Academic Level	Undergraduate (UG)
Faculty	Science
Department	Biology
Implementation Date	Fall 2025
Subject Code	BIOL - Biology
Course Number	1260
Descriptive Title	Anatomy and Physiology II
Short Title	Anatomy and Physiology II
CIP Code	260901 - Physiology, general
Fee Category 2.a.1?	Yes
Differential Fee Category?	

Calendar Description

Students will explore ~~continue to study~~ the foundational concepts ~~major organ systems~~ of ~~the~~ human anatomy and physiology through hands-on learning, ~~body,~~ focusing on

the respiratory, digestive, urinary, and ~~excretory, nervous, immune and~~ reproductive systems. Emphasis is placed on practical application and experiential learning in a laboratory setting to reinforce theoretical knowledge. ~~Examination of these systems will include related basic concepts in microbiology.Students will study these topics using a student-centred laboratory format.~~

Suggested Credit Hours	4	Credits	0-4
Suggested Classroom Hours	4	Lecture Hours	0-4 ~~0-3~~
Suggested Lab Hours	3	Lab Hours	0-3 ~~0-2~~
Suggested Other Hours (Clinical, Practicum, etc)		Other Hours	~~0-3~~
Total Contact Hours		Contact Hours	0-7 ~~0-8~~

Is this course repeatable for additional credit?	No
Cross-listed Courses	
Equivalent Courses	
Credit-exclusion Courses	BIOL 1270 - Human Anatomy and Physiology II
Optional Calendar Description Note	

Prerequisites

BIOL 1160

Corequisites

Schedule Types

Schedule Type
Class
Lab

Schedule Type
Class/Lab

Course Attributes

Pathway to Undergraduate Studies	
Degree Requirement Attributes	Quantitative
Suggested Registration Restrictions	
Course Registration Restrictions	Include Undergraduate

Course Learning Outcomes

	A student who successfully completes the course will have reliably demonstrated the ability to:
1	Use lecture content, anatomical models ~~Acquire the information to develop a basic understanding of the structural organization~~ and laboratory techniques to identify and analyze the structures and ~~specified~~ functions of the respiratory, digestive, urinary, immune, and reproductive systems. ~~body as an integrated whole~~
2	Apply lecture content and microbiological techniques, including culturing and microscopy, to study microorganisms and their role in health and disease. ~~Describe the basic structure and function of cells and tissues and relate this information to the structure and function of the organs and organ systems of the body~~
3	Identify immune system ~~Describe the location, structural~~ components and stages ~~function~~ of infection through lectures and hands-on activities. ~~the following systems: excretory system, immune system, nervous system and reproductive system~~
4	Describe the role ~~mechanisms~~ of the nervous and/or endocrine ~~renal, respiratory and circulatory~~ systems ~~which contribute to maintaining fluid~~

	A student who successfully completes the course will have reliably demonstrated the ability to:
	~~balance and electrolyte balance~~ in regulating the aforementioned body systems. ~~fluid compartments~~
5	Relate theoretical knowledge of physiological systems to practical applications, emphasizing ~~Distinguish between sensory and motor pathways in~~ the integration of structure and function through laboratory-based inquiry ~~somatic~~ and experimentation. ~~autonomic nervous systems and relate these to body movement and to physiological homeostasis~~
~~6~~	~~Outline the defensive responses of the body to injury and to microbial invasion~~
~~7~~	~~Define and explain the pathogenic relationship (between the human body and micro-organisms) which is established during an 'illness' (to include bacterial and viral infections)~~
~~8~~	~~Describe the process of gamete production in the male and female, focusing on hormonal control and its impact on reproductive and non-reproductive body tissues~~
~~9~~	~~Describe fertilization and the early stages of embryonic development, including development of the extra-embryonic membranes~~
~~10~~	~~Explain how the nervous and endocrine systems control selected activities of the other organ systems through feedback activities~~
~~11~~	~~Provide examples, within selected organ systems, of the mechanism(s) for growth and development and the impact of aging~~
~~12~~	~~Relate nutrient requirements to proper functioning and development of selected organ systems~~
~~13~~	~~Define and describe the action(s) and effect(s) of selected drug groups~~
~~14~~	~~Develop time management techniques in a self-directed learning environment~~

Content will include, but is not restricted to, the following:

1. The respiratory system
Lecture:
MODULE I Theory Component Overview of the Urinary System · Organs of the urinarysystem:Macroscopic structure and function · Kidney microscopestructure: · Organs The nephron · Physiology of the respiratory system
: Gas exchange
: Neuronal regulation kidney · Urine · Endocrine control of the respiratory system
Lab
: Spirometry
: Examining models of the respiratory tract

2. urinary system · Diuretics The Need for Regulation: The digestive system
Lecture:
Fluid, Electrolytes and Acid-Base Balance · Regulation of fluid and electrolytes (Electrolyte replacement solutions) · Regulation of blood pH (Electrolyte replacement solutions) The Nervous System · The central nervoussystem:Structure and function
: The peripheral nervoussystem:Structure and function · Afferent and efferent somatic pathways. Structure and function (Analgesics) · Efferent autonomicpathways:Structure and function (Adrenergic and chlorinergic receptors)
: Cognitive phenomena(e.g.left/right brain, memory, parental bonding)
: Specialsenses:Structure and function Laboratory Component · The Organs of the urinary system (includes pig kidney dissection) and nephron structure · Urinalysis
: Regulation of blood pH · Organization of the brain (regional structure and function) (includes sheep brain dissection) · Spinal cord, spinal nerves and the spinal reflex
: The structural components of the eye and their functions (includes cow eye dissection) MODULE II Theory Component Host Defences · Infectious disease process · Systematic anti-infectives Non-specific Immunity · Anatomical and physiological modes ofdefense:The integument, the myeloid, lymphoid and reticular tissues · The inflammatory response (histamines and antihistamines) · Hemostasis, coagulation and wound healing · Anticoagulants and hemostatics Specific Immunity
: Humoral and cellular immunity · Natural and acquired immunity (Immunization)
: Application of antigen-antibodyconcept:blood groups & blood transfusion reactions Reproduction:Continuity of the Species· Genetics:Heredity transmission of the physical characteristics · The female reproductivesystem: · Organs of the digestive system
: Mechanical Organs, sex cells and chemical digestion
: Motility
: Nutrient absorption
: Neuronal the sexual response · Hormonal control of the female reproductive system
: Use of estrogen and endocrine control of the digestive system
Lab: progesterone · The male reproductive system:

· Examining models of the digestive system
· Carry out experiments examining the chemical basis for digestion

3. The urinary system
Lecture:
~~Organs, sex cells hormonal control and sexual response (use of testosterone) Creation:Developmental and Adjustment Processes of Pregnancy · Embryology and Fetology · Extra-embryoticcomponents:Structure and function · Hormonal control of pregnancy (Uterinestimulants:~~· Organs ~~Oxytocics) Laboratory Component~~
· ~~Summary~~ of the urinary system
· The nephron ~~white blood cell development, movement in blood~~ and glomerular filtration, tubular reabsorption ~~lymphatic tissue~~ and tubular secretion
· Urine
· Endocrine control ~~functions · Determination~~ of ~~blood type (ABO and Rh) and blood transfusions · Organs, tissues and physiology of the female reproductive system~~
· ~~Organs, tissues and physiology of~~ the urinary ~~male reproductive~~ system
· Fluid, electrolyte and pH balance
Lab:
· Examining models of the urinary system, particularly the kidney
· Kidney dissection
· Experiment to examine the association between carbon dioxide and pH
· Urinalysis

4. Microbiology and immunity
Lecture:
· Bacteria and viruses
· Stages of infection
· Portals of entry and exit
· Innate immunity
· Adaptive immunity
Lab:
· Blood typing
· Microscopy of white blood cells
· Environmental sampling of microbes
· Culturing microorganisms

5. Reproductive system
Lecture:
· Male reproductive anatomy and physiology
· Female reproductive anatomy and physiology
· Hormonal regulation of male and female reproductive systems
· Fertilization
· Embryonic development

· Fetal development
· Pregnancy and birth
Lab:
· Examining models ~~Heredity transmission~~ of the male and ~~physical characteristics~~
· ~~The~~ female reproductive systems
· Examining models of the embryo/fetus at various stages of pregnancy ~~system:~~

Course Learning Activities

Learning activities should be appropriately related to learning outcomes. Activities may include, but are not restricted to, the following:
Attending class and taking notes
Participating in class discussions
Performing basic laboratory experiments
Reading and analyzing written material in textbooks and articles to complete course objectives
Gathering information related to the course objectives from computer software and laboratory demonstrations, models and experiments
Using the library and other audio-visual resources to complete course objectives
Reading, studying and completing course objectives outside of class time
~~Orally describing and explaining information gathered in laboratory experiments and demonstration materials~~

Mastery Criteria

Assessment

Assessment plans comply with KPU policy and may resemble the following:

Add the details about 1 assessment prior to W date, note that an assessment can evaluate multiple LO, ensure that each LO has been evaluated, should have multi modes of assessment (not all exam based for example)

Assessment Type 1	Exams (at least 2) (40-60%) ~~Weekly Evaluations - Weekly quizzes and weekly lab activities Modules I~~	Type 1 Value	50 ~~15~~
Assessment Type 2	Quizzes (10-30%) ~~Module II~~	Type 2 Value	20 ~~15~~

Assessment Type 3	Activities/assignments (5-15%) ~~Mid-term Examination~~	Type 3 Value	10 ~~35~~
Assessment Type 4	Laboratory quizzes/assignments/exam (15-30%) ~~Final Examination~~	Type 4 Value	20 ~~35~~
Assessment Type 5		Type 5 Value	
Assessment Type 6		Type 6 Value	
Assessment Type 7		Type 7 Value	
		TOTAL	100

Additional Notes

No single assessment will be worth more than 30% of the final grade.

Attach Learning contribution rubric

Grading System - default	Letter Grades (N)
Alternate Grading System(s) - not default	Not Gradable (0)

Methods for Prior Learning Assessment	Challenge Exam Demonstration Interview

Required Learning Resources

OpenStax College. (2022). ~~Principles of Tortora,G.J.&B.Derrickson.~~Anatomy & ~~and~~ Physiology. OpenStax. http://cnx.org/content/col11496/latest/

Kwantlen Polytechnic University. ~~New York,NY:Wiley &Sons.LatestEdition.Kwantlen PolytechnicUniversity.~~Biology Modules: BIOL 1260 (2 modules). Langley, BC: Kwantlen Polytechnic University. Latest Edition. ~~Kwantlen Polytechnic University.Latest Edition.~~

Recommended Learning Resources

Other Course Materials	
Open Educational Resources (OER)	OpenStax College. (2022). Anatomy & Physiology. OpenStax. http://cnx.org/content/col11496/latest/
Does this course require the use of animals?	No

Do library resources in this area need more development?	No	If yes, then list details
Is this course externally accredited?	No	
External Accrediting Body		

Request for Quantitative Course Attribute

Please summarize the course content and the rationale behind the QUAN attribute request.

Select which Quantitative Criteria this course meets (include at least 2).

Attach Supporting Documents

Course Developer(s)	
Course Reviser(s)	Nick Inglis; Michael Kiraly
Date for Next Review	2030-09-01 ~~2024-09-01~~

Viewing: BIOL 1170 : Human Anatomy and Physiology I
Last edit: Wed, 15 Jan 2025 17:29:03 GMT

Changes proposed by: Nick Inglis (100047697)

Reviewer Comments

Krista Gerlich-Fitzgerald (krista.gerlichfitzgerald) (Thu, 16 Jan 2025 00:33:15 GMT): It is recommended that a more specific course title and description are used to differentiate the courses. As the courses will be listed in the calendar back to back, a little more difference could support students deciding which to take. NOTE: Should pre-req changes be also included for HSCI 3215, 3225, 4140 to allow BIOL 1170 and BIOL 1270 to be seen as an option for pre-req (note in the background students will satisfy the requirement however, should it be visible for all students to see either are options?) Lastly: cert HEAL, BPN and BSN require program changes as a result of this change

Academic Level

Undergraduate (UG)

Faculty

Science

Department

Biology

Implementation Date

Fall 2025

Subject Code

BIOL - Biology

Course Number

1170

Descriptive Title

Human Anatomy and Physiology I

Short Title

Anatomy and Physiology I

CIP Code

260901 - Physiology, general

Fee Category 2.a.1?

Yes

Calendar Description

Students will study the foundational concepts of human anatomy and physiology, focusing on anatomical terminology, biochemistry, cells, tissues, and major organ systems including the integumentary, nervous, endocrine, skeletal, muscular, and cardiovascular systems.

Suggested Credit Hours

3

Credits

3

Suggested Classroom Hours

4

Lecture Hours

4

Total Contact Hours

4

Contact Hours

4

Is this course repeatable for additional credit?

No

Credit-exclusion Courses

BIOL 1160 - Anatomy and Physiology I

Prerequisites

Either (a) BIOL 1110; or (b) both (i) Biology 12 (B) or Anatomy and Physiology 12 (B) or BIOQ 1099 (B), and (ii) Chemistry 11 (B) or Chemistry 12 (B) or CHEQ 1094 (B); or (c) active registration with the College of Licensed Practical Nurses of British Columbia.

Schedule Types

Schedule Type
Class

Course Attributes

Course Registration Restrictions

Include Undergraduate

Course Learning Outcomes

	A student who successfully completes the course will have reliably demonstrated the ability to:
1	Understand and use appropriate anatomical terminology.
2	Describe the basic chemistry and major biological macromolecules and relate this information to the structure and function of cells, tissues, and organs.
3	Describe the basic structure and function of cells and tissues and relate this information to the structure and function of the organs and organ systems of the body
4	Describe the location, structural components and function of the following systems: integumentary system, nervous system, endocrine system, muscular system, skeletal system, and cardiovascular system
5	Explain how the nervous and endocrine systems control selected activities of the other organ systems through feedback activities
6	Relate the structures of the aforementioned systems to their functions and interactions.

Content will include, but is not restricted to, the following:

Anatomical terminology and key themes

- Body planes
- Directional terminology
- Regional terminology
- Body cavities
- Fluid compartments
- Serous membranes
- Homeostasis
- Feedback systems

Introduction to Biochemistry

- Proteins and enzymes
- Carbohydrates
- Lipids
- Nucleic acids

Introduction to cells and tissues
- Cell membrane structure and function
- Membrane transport
- Organelles
- Epithelial, muscular, nervous and connective tissues

The integumentary system
- The skin and accessory structures

The nervous and endocrine systems
- Nervous tissue and action potentials
- Peripheral nervous system
- Central nervous system
- Neuronal pathways
- Endocrine organs
- Hormones and endocrine signalling

The muscular and skeletal systems
- Cartilage and bone tissue
- The skeletal system
- Muscle tissue
- Skeletal muscle
- Joints and movement

The cardiovascular system
- Blood components
- Structure and function of blood vessels
- Blood pressure and circulation
- Structure and function of the heart
- Regulation of cardiac function
- Lymphatic system

Course Learning Activities

Learning activities should be appropriately related to learning outcomes. Activities may include, but are not restricted to, the following:
Attending class and taking notes
Participating in class discussions
Reading and analyzing written material in textbooks and other resources to complete course objectives
Using the library and other audio-visual resources to complete course objectives
Reading, studying and completing course objectives outside of class time

Assessment

Assessment plans comply with KPU policy and may resemble the following:

Add the details about 1 assessment prior to W date, note that an assessment can evaluate multiple LO, ensure that each LO has been evaluated, should have multi modes of assessment (not all exam based for example)

Assessment Type 1

Exams (at least 2) (40-60%)

Type 1 Value

50

Assessment Type 2

Quizzes (10-30%)

Type 2 Value

25

Assessment Type 3
Activities/assignments (20-30%)
Type 3 Value
25

TOTAL
100

Additional Notes
No single assessment will be worth more than 30% of the final grade.

Grading System - default
Letter Grades (N)

Methods for Prior Learning Assessment
Challenge Exam
Demonstration
Interview

Required Learning Resources
OpenStax College. (2022). Anatomy & Physiology. OpenStax. http://cnx.org/content/col11496/latest/

Open Educational Resources (OER)
OpenStax College. (2022). Anatomy & Physiology. OpenStax. http://cnx.org/content/col11496/latest/

Does this course require the use of animals?
No

Do library resources in this area need more development?
No

Is this course externally accredited?
No

Course Developer(s)
Nick Inglis; Michael Kiraly

Date for Next Review
2030-09-01

Key: 7176

KPU

Viewing: BIOL 1270 : Human Anatomy and Physiology II

Last edit: Wed, 15 Jan 2025 17:32:52 GMT

Changes proposed by: Nick Inglis (100047697)

Reviewer Comments

Krista Gerlich-Fitzgerald (krista.gerlichfitzgerald) (Thu, 16 Jan 2025 00:33:15 GMT): It is recommended that a more specific course title and description are used to differentiate the courses. As the courses will be listed in the calendar back to back, a little more difference could support students deciding which to take. NOTE: Should pre-req changes be also included for HSCI 3215, 3225, 4140 to allow BIOL 1170 and BIOL 1270 to be seen as an option for pre-req (note in the background students will satisfy the requirement however, should it be visible for all students to see either are options?) Lastly: cert HEAL, BPN and BSN require program changes as a result of this change

Academic Level

Undergraduate (UG)

Faculty

Science

Department

Biology

Implementation Date

Fall 2025

Subject Code

BIOL - Biology

Course Number

1270

Descriptive Title

Human Anatomy and Physiology II

Short Title

Anatomy and Physiology II

CIP Code

260901 - Physiology, general

Fee Category 2.a.1?

Yes

Calendar Description

Students will continue their study of human anatomy and physiology, focusing on the respiratory, digestive, urinary, and reproductive systems, as well as microbiology, innate and adaptive immunity, and pregnancy and development.

Suggested Credit Hours

3

Credits

3

Suggested Classroom Hours

4

Lecture Hours

4

Total Contact Hours

4

Contact Hours

4

Is this course repeatable for additional credit?
No

Credit-exclusion Courses
BIOL 1260 - Anatomy and Physiology II

Prerequisites
BIOL 1160 or BIOL 1170

Schedule Types

Schedule Type
Class

Course Attributes

Course Registration Restrictions
Include Undergraduate

Course Learning Outcomes

	A student who successfully completes the course will have reliably demonstrated the ability to:
1	Describe the structure and function of the respiratory, digestive, urinary, and reproductive systems.
2	Describe the basic concepts of microbiology and the immune system.
3	Describe the processes of reproduction, pregnancy and development.
4	Describe the role of the nervous and/or endocrine systems in regulating the aforementioned body systems.
5	Relate the structure of the aforementioned body systems to their functions and interactions.

Content will include, but is not restricted to, the following:

The respiratory system
- Organs of the respiratory system
- Gas exchange
- Neuronal regulation of the respiratory system
- Spirometry

The digestive system
- Organs of the digestive system
- Mechanical and chemical digestion
- Motility
- Nutrient absorption
- Neuronal and endocrine control of the digestive system

The urinary system
- Organs of the urinary system
- The nephron and glomerular filtration, tubular reabsorption and tubular secretion
- Urine
- Endocrine control of the urinary system
- Fluid, electrolyte and pH balance

Microbiology and immunity
- Bacteria and viruses
- Stages of infection
- Portals of entry and exit
- Innate immunity
- Adaptive immunity

Reproductive system
- Male reproductive anatomy and physiology
- Female reproductive anatomy and physiology
- Hormonal regulation of male and female reproductive systems

- Fertilization
- Embryonic development
- Fetal development
- Pregnancy and birth

Course Learning Activities

Learning activities should be appropriately related to learning outcomes. Activities may include, but are not restricted to, the following:
Attending class and taking notes
Participating in class discussions
Reading and analyzing written material in textbooks and articles to complete course objectives
Gathering information related to the course objectives from computer software and demonstrations, models and experiments
Using the library and other audio-visual resources to complete course objectives
Reading, studying and completing course objectives outside of class time

Assessment

Assessment plans comply with KPU policy and may resemble the following:

Add the details about 1 assessment prior to W date, note that an assessment can evaluate multiple LO, ensure that each LO has been evaluated, should have multi modes of assessment (not all exam based for example)

Assessment Type 1

Exams (at least 2) (40-60%)

Type 1 Value

50

Assessment Type 2

Quizzes (10-30%)

Type 2 Value

25

Assessment Type 3

Activities/assignments (20-30%)

Type 3 Value

25

TOTAL

100

Additional Notes

No single assessment will be worth more than 30% of the final grade.

Grading System - default

Letter Grades (N)

Methods for Prior Learning Assessment

Challenge Exam
Demonstration
Interview

Required Learning Resources

OpenStax College. (2022). Anatomy & Physiology. OpenStax. http://cnx.org/content/col11496/latest/

Open Educational Resources (OER)

OpenStax College. (2022). Anatomy & Physiology. OpenStax. http://cnx.org/content/col11496/latest/

Does this course require the use of animals?
No

Do library resources in this area need more development?
No

Is this course externally accredited?
No

Course Developer(s)
Nick Inglis; Michael Kiraly

Date for Next Review
2030-09-01

Key: 7177