

**COURSE NAME:** IAP100 Anatomy and Physiology I

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Credit Value: 3  
Total Course Hours: 42  
Prerequisite Course(s): None  
Corequisite Course(s): None

## COURSE DESCRIPTION

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This course introduces the learner to the normal development, structures and functions of the human body. The learner will examine the physiological components of the human body in order to obtain understanding on how the structures and functions of the body are related.

## LAND ACKNOWLEDGEMENT

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Canadore College resides on the traditional territory of the Anishinaabeg and within lands protected by the Robinson Huron Treaty of 1850. This land is occupied by the people of Nipissing First Nation since time immemorial.

## PLAR INFORMATION

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This course is not eligible for Prior Learning Assessment and Recognition.

## COURSE LEARNING OUTCOMES

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Upon completion of this course, the student will have reliably demonstrated the ability to:

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| <p>1.0 Use the appropriate terminology related to the organization, structure and function of the human body.</p> <ul style="list-style-type: none"><li>1.1 Define anatomy and physiology.</li><li>1.2 Name the following:<ul style="list-style-type: none"><li>1.2.1 Levels of organization of the human body.</li><li>1.2.2 Major organs for each body system.</li><li>1.2.3 The directional terms that describes the location of body parts.</li><li>1.2.4 The major body regions.</li><li>1.2.5 The four (4) planes used in making sections of the body or body parts.</li><li>1.2.6 The two (2) major body cavities, their subdivisions and membranes.</li><li>1.2.7 The major organs located in each body cavity.</li><li>1.2.8 The four (4) quadrants and nine (9) regions of the abdominopelvic region.</li></ul></li><li>1.3 Review the selected key terms (vocabulary) for each specific area of study/system studied.</li></ul> <p>2.0 Describe the location, development, structure and function of cells, tissues and organs of stated body systems.</p> | <p>2.1 The cell:</p> <ul style="list-style-type: none"><li>2.1.1 Describe the structure of a typical cell.</li><li>2.1.2 List the function of the major parts of a typical cell.</li><li>2.1.3 Identify the two (2) processes that allow substances to enter and leave cells.</li><li>2.1.4 Explain cellular respiration and its importance.</li><li>2.1.5 Explain the role of DNA and RNA.</li><li>2.1.6 List the two (2) phases of Mitotic cell division.</li><li>2.1.7 Differentiate between mitosis and meiosis.</li><li>2.1.8 Define homeostasis and explain its relationship to normal body functions</li><li>2.1.9 List the five (5) basic needs essential to human life</li></ul> <p>2.2 Tissues and Membranes:</p> <ul style="list-style-type: none"><li>2.2.1 Describe the distinguishing characteristics of each type of tissue and membrane.</li><li>2.2.2 Identify the common location and function of each type of tissue and</li></ul> |
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membrane.

### 2.3 Integumentary System:

2.3.1 Describe the basic structures of the skin and its layers.

2.3.2 Describe the basic functions of the skin and its layers.

2.3.3 Describe how skin color is determined.

2.3.4 Identify the accessory structures of the epidermis and their function.

### 2.4 Muscle System:

2.4.1 Compare the structure and function of the three (3) types of muscle tissue.

2.4.2 Explain the basic concept of muscle contraction.

2.4.3 Explain the relationship between muscle origin, insertion and action.

2.4.4 Identify the major muscles of the body.

2.4.5 Describe the location and action of the major muscles of the body.

### 2.5 Skeletal System:

2.5.1 Identify the major functions of the skeletal system.

2.5.2 Identify the composition of bone structure.

2.5.3 Explain the basic process of bone formation.

2.5.4 Name the two (2) divisions of the skeleton.

2.5.5 Identify the major bones of the axial and appendicular skeleton.

2.5.6 Compare cervical, thoracic, lumbar, and sacral vertebrae as to size, structure, and number.

2.5.7 Compare and locate examples of immovable, slightly movable and freely movable joints.

### 2.6 The Nervous System:

2.6.1 Name the anatomical divisions of the nervous system, their components and

functions.

2.6.2 Name the functional divisions of the nervous system, their components and functions.

2.6.3 Identify the two (2) types of cells that make up nerve tissue.

2.6.4 Describe how impulses are transmitted across a synapse.

2.6.5 Explain how the central nervous system is protected from injury.

### 2.7 The Special Senses:

2.7.1 Describe the basic function of sensory receptors, neurons, nerves and the cerebral cortex.

2.7.2 Describe the location of receptors for heat, cold, touch, pressure and pain.

2.7.3 Describe the location, structure, and function of olfactory and taste receptors, receptors involved in hearing, receptors involved in equilibrium and sight.

### 3.0 Examine the chemical composition and chemical interactions (life processes) of the human body.

3.1 Explain why knowledge of basic chemistry is important in the study of life processes

3.2 Describe the basic structure of an atom.

3.3 Distinguish between organic and inorganic compounds.

3.4 Identify the difference between acids & bases

3.5 Examine the concept of pH and its relationship to acids & bases in the body.

3.6 List the four (4) major groups of organic substances in the body and give examples and functions of specific types in each group.

3.7 Explain the role of enzymes.

3.8 Describe the role of ATP.

3.9 Explain the properties that make water such an important inorganic molecule in living organisms.

## GENERAL EDUCATION

This is not a General Education course.

## PROGRAM OUTCOMES

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This course contributes to the following Ministry of Colleges and Universities approved program learning outcomes (PLO):

### Dental Hygiene

2. evaluate clients' oral health status using determinants of health and risk analysis to identify needs, justify treatment decisions and provide appropriate referrals to other health care professionals as required.
3. design, implement and evaluate a range of primary, interceptive, therapeutic, preventative, and on-going oral health care services to meet the unique needs of clients.

### Practical Nursing

2. assess clients across the life span, in a systematic and holistic manner.

### Respiratory Therapy

5. Assess and interpret relevant diagnostic and patient information when treating patients/clients\* who are experiencing a range of cardio-respiratory\* conditions.
7. Select, implement, evaluate and modify therapeutic cardio-respiratory\* interventions to provide evidence-based, patient-centered care in a range of practice settings\*.

## ESSENTIAL EMPLOYABILITY SKILLS OUTCOMES

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This course contributes to the following Ministry of Colleges and Universities approved essential employability skills (EES) outcomes:

5. Use a variety of thinking skills to anticipate and solve problems.

## EXTERNAL COURSE ACCREDITATIONS AND CONDITIONS

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This course is a compulsory course within the Canadore College Practical Nursing Program, as reviewed and approved by the College of Nurses of Ontario

## COURSE EVALUATION

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Evaluation Item	Weight
Quizzes	25%
Tests	75%

## COURSE PASS GRADE

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60

## GRADING SYSTEM

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A+:	90-100%	B+:	77-79%	C+:	65-69%	D:	50-54%	S - Satisfactory
A:	85-89%	B:	73-76%	C:	60-64%	F:	0-49%	I - Incomplete
A-:	80-84%	B-:	70-72%	D+:	55-59%			F- Repeat Course, included in GPA

FS- Failure Supplemental  
FR- Repeat course,  
excluded from GPA

\*For a complete chart of grades and descriptions, please see the Grading Policy.

## LEARNING RESOURCES

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Course Textbooks:

Required:

Title: Essentials of Anatomy & Physiology Etext Access Card plus Mastering A&P Package  
Author: Martini, F. & Bartholomew.E.  
Publisher: Pearson  
Edition: 2020  
Print ISBN: 9780135203804  
eBook ISBN: 9780135215753

Additional Learning Resources:

Pearson Mastering online content ISBN-13: 9780135257241

Please see the [Campus Bookstore](#) to verify the current textbook costs and your [program page](#) for additional program fees and/or learning material requirements (see the "Tuition Fees" and "What You Need" sections).

Resources listed on the course outline support the achievement of learning outcomes, and may be used throughout the course to varying degrees depending on the instructor's teaching methodology and the nature of the resource.

Technology requirements - <https://www.canadorecollege.ca/BYOD>

The Harris Learning Library's staff can help you find resources to support your learning - [www.eclibrary.ca](http://www.eclibrary.ca)

## LEARNING ACTIVITIES

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Online activities/discussions

In class activities/discussions

## DELIVERY MODE

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This course may be delivered, in whole or in part, in a number of modalities, including In-Person, Remote (synchronous and/or asynchronous), hybrid, or Hyflex, as per accreditation and/or regulatory standards where appropriate. This information is identified on the course schedule (student and faculty).

## RECORDING GUIDELINES

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This class may be recorded by faculty of the College. Faculty will inform students when recording of the class commences and ceases. 'Recorded' means that the audio-visual and chat portions of the class will be recorded and then be stored on the College or vendor provider server. They will be made available to students, but only for the express and sole use of those registered in this course. If you have any questions or concerns about this recording, please contact your instructor or the College's privacy officer at [privacy.officer@canadorecollege.ca](mailto:privacy.officer@canadorecollege.ca). Full recording guidelines can be found at: <https://cdn.agilitycms.com/canadore-college/academic-centre-of-excellence/Canadore%20Recording%20Guidelines.pdf>. Recordings are to be managed (or removed) as per the College's Recording Guidelines following the completion of the course.

## ACADEMIC POLICIES

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Canadore College is committed to the highest standards of academic integrity, and expects students to adhere to these standards as part of the learning process in all environments. The College's Academic Integrity policy seeks to ensure that all students understand their rights and responsibilities in upholding academic integrity and that students receive an accurate and fair assessment of their work. Please review the Academic Integrity policy (A-18) and other academic policies found on our website: <https://www.canadorecollege.ca/about/policies>.

## COLLEGE POLICIES

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- Protecting human rights in support of a respectful college community

For college policies please see: <http://www.canadorecollege.ca/about-us/college-policies>.

## Accessibility Learning Services for Students with Disabilities - Student Success Services

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Student Success Services provides comprehensive support to students. We aim to ensure that all students have equal access to educational opportunities and can succeed in their academic journey. Our services focus on reducing and eliminating barriers related to education through individualized accommodations and support. If you are a student with a disability, we encourage you to register with Accessible Learning by completing the Student Success – Accessible Learning Services Form ([https://canadorecollege-accommodate.symphlicity.com/public\\_accommodation/](https://canadorecollege-accommodate.symphlicity.com/public_accommodation/)).

For more detailed information about the services offered, please visit our webpage: <https://isucceed.canadorecollege.ca/students>. To connect with Student Success Services email [studentsuccessnow@canadorecollege.ca](mailto:studentsuccessnow@canadorecollege.ca) or call 705.474.7600 ext 5205.

## FIRST PEOPLES' CENTRE:

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A culturally supportive and comfortable environment where you can study, socialize, and access a wide range

of resources and confidential student focused services.

- Counselling services
- Elders on Campus and Cultural Advisors
- Cultural and Spiritual Wellness
- Peer tutoring/Peer Mentorship
- wholistic support network
- Social events and workshops on study skills, self-care & life skills

Drop by our offices at C254 College Drive, W103 Commerce Court or Call 705-474-7600 Ext. 5961

<https://www.canadorecollege.ca/first-peoples-centre>

### **WAIVER OF RESPONSIBILITY**

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Every attempt is made to ensure the accuracy of this information as of the date of publication. The college reserves the right to modify, change, add, or delete content.

### **HISTORICAL COURSE OUTLINES**

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Students use course outlines to support their learning. Students are responsible for retaining course outlines for future use in applications for transfer of credit to other educational institutions.

### **ADDITIONAL DISCLAIMER NOTE**

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Students are expected to adhere to the policies and procedures as outlined in the Practical Nursing Student Success Guide 2025-2026. All previous guides will not apply