

ACP 504 – Aeromedical

6 credits, 138 hours

Course Description

This course will familiarize the student with the special aspects of patient care associated with air transport and survival. There will be a focus placed on understanding how altitude and pressure affect human physiology, where treatment variables associated with high altitude transport will be explored.

Pre-requisites: ACP 501, ACP 502, ACP 503, ACP 505, ACP 509, ACP 516, ACP 517, ACP 518, ACP 507, and ACP 508

Co-requisites: ACP 506, ACP 510, ACP 513, and ACP 514

Instructor

Trevor Rivers ACP

Office: BL253

Email:

trevor.rivers@keyano.ca

Office Hours (virtual)

0800 – 1700

Available via Keyano email, microsoft teams, and/or zoom

Hours of Instruction

138

Required Textbook

Caroline, N. (2021). *Nancy Caroline's emergency care in the streets* (8th ed.). Jones & Bartlett Learning.

Field, J. M., Gonzales, L., Hazinski, M. F., Ruple, J. A., & American Heart Association. (2020). *Advanced cardiovascular life support provider manual: ACLS*. Dallas, TX: American Heart Association.

McCance, K. L., & Huether, S. E. (2019). *Pathophysiology: The biologic basis for disease in adults and children* (8th ed.). Maryland Heights, Mo: Mosby Elsevier.

Tintinalli, J. E., Stapczynski, J. S., Ma, O. J., Yealy, D. M., Meckler, G. D., & Cline, D. (2019). *Tintinalli's emergency medicine: A comprehensive study guide* (9th ed.). New York: McGraw-Hill Education.

Resources and evidence-based practice provided by instructor as needed

Course Outcomes

Upon successful completion of the aeromedical course the student will:

- Understand the history of medevac and discuss advantages and disadvantages to different modes of air transport including landing zone safety and patient transfers
- Apply knowledge attained in anatomy, physiology, and pathophysiology across life spans
- Apply knowledge of physical examination, history taking, differential diagnosis, treatments, and lab values pertinent to optimal patient care
- Understand how environmental changes, altitude, and pressure can affect human physiology
- Understand and demonstrate the treatment variables and considerations associated with high altitude transport
- Understand medevac transport including equipment, resources, operations, protocols, and communications
- Evaluate, adapt, and apply effective patient care procedures for air transport while maintaining patient comfort and safety
- Learn emergency management of a wilderness survival situation
- Apply understanding and demonstrate knowledge during tech week and medevac practical hours to improve praxis

Evaluation

- Students must achieve a minimum of B grade (76%) for total course grade to progress
- 10% deductions will occur for every day of late submissions for assignments
- Participation marks contribute to final grade

Relevant NOCP Competencies

General Competency	Specific Competency for ACP/CCP
7.3	a, b, c
7.4	a, b

Course Schedule for 2022

Class dates	Subject	Modules
Class 1 March 10, 2022 (1800- 2000)	Orientation and Introduction History of Aeromedical Services Helicopter Safety and Orientation	Syllabus Module 1 Module 2
Class 2 March 23, 2022 (1800- 2000)	Fixed Wing Safety and Orientation	Module 3
TECH WEEK April 4-8, 2022		
Class 3 April 12, 2022 (0900-1100)	Flight Philosophy	Module 4
Class 4 April 19, 2022 (0900-1100)	Patient Assessment, Preparation and Care	Module 5
Class 5 April 22, 2022 (1300-1500)	Managing Specific Patient Conditions	Module 6
TECH WEEK April 25-29, 2022		

Course Grading and Weighting

Grade weighting	
Module 1 and 2 Case Study Assignment	10%
Module 3 Case Study Assignment	10%
Module 4 Case Study Assignment	10%
Module 5 Case Study Assignment	10%
Module 6 Case Study Assignment	10%
Paper See assignment details and rubric on page 4 Due on April 20, 2022 at 23:59 hours	30%
Participation Attendance to synchronous lectures and flight orientation/hours Details regarding flight hours TBA – sign up for 3-5 days practical hours early	20%
Total Final Grade	100%

Please Note:

Date and time allotted to each topic is subject to change.

Research Paper (30%)

The topic of your aeromedical research paper will be approved by the instructor and should relate to topics discussed in the aeromedical course.

The aeromedical paper must include the following criteria:

- Typed in Times New Roman (12 point), double spaced, and 1-inch borders;
- No less than 5 full pages, but no more than 7 full pages [not including title page or reference page(s)];
- Follow rubric criteria (below);
- Title page must include: Title, student name, course name and number, course instructor, and due date of paper;
- Written in 3rd person;
- Include information gathered from ALL articles (minimum 5 total);
- Paper outline should carefully support and discuss your topic:
 - Introduction: Opening statement should be your topic. Outline main concepts that will be included in the body of your paper.
 - Body: Well developed paragraphs that focus on your topic. Articulate your arguments to support your topic using your selected research articles.
 - Conclusion: Restate your introduction and explain how your findings support your topic.

Introduction – Topic & Purpose (10%)	10 9 8	7 6 5 4	3 2 1 0
<ul style="list-style-type: none"> • Topic and opening statement is clear and • Outlines main concepts that will be included in the body of the paper 	<ul style="list-style-type: none"> • Meets all criteria at a high level • Clear 	<ul style="list-style-type: none"> • Meets some criteria • Uneven • Less clear 	<ul style="list-style-type: none"> • Meets few criteria • Unclear in most respects
Body - Use and Selection of Evidence (50%)	10 9 8	7 6 5 4	3 2 1 0
<ul style="list-style-type: none"> • Provides a minimum of 5 sourced peer reviewed articles that are within the last 10 years (more recent is preferred based on topic) • Excellent selection of articles to support topic • Provides relevant and effective evidence using paraphrasing and/or quotations to support topic 	<ul style="list-style-type: none"> • Meets all criteria at a high level • Clearly supports paper topic 	<ul style="list-style-type: none"> • Meets some criteria • Less effective and/or clear use of articles to support paper topic 	<ul style="list-style-type: none"> • Meets few criteria • Ineffective and/or unclear use of articles to support paper topic
Conclusion–Summary of Introduction (10%)	10 9 8	7 6 5 4	3 2 1 0
<ul style="list-style-type: none"> • Restates the introduction and how research supported your topic 	<ul style="list-style-type: none"> • Meets all criteria at a high level • Clear an organized 	<ul style="list-style-type: none"> • Meets some criteria • Less clear and only partially restates the introduction and/or research does not support the topic 	<ul style="list-style-type: none"> • Meets few criteria • Unclear and does not restate the introduction and/or research does not support the topic
Organization & Clarity (10%)	10 9 8	7 6 5 4	3 2 1 0
<ul style="list-style-type: none"> • Well organized paper with clear headings and supporting reasoning • Every paragraph begins with topic sentences and is followed with supporting discussion • Paper is easy to follow 	<ul style="list-style-type: none"> • Meets all criteria at a high level • Clear 	<ul style="list-style-type: none"> • Meets some criteria • Less clear 	<ul style="list-style-type: none"> • Meets few criteria • Unclear in most respects
Editing & APA (10%)	10 9 8	7 6 5 4	3 2 1 0
<ul style="list-style-type: none"> • Correct spelling, punctuation, and grammar. • APA formatting for page numbers, title page, header, and reference page 	<ul style="list-style-type: none"> • Meets all criteria at a high level • Little to no errors 	<ul style="list-style-type: none"> • Meets some criteria • Several errors leading to unclear writing 	<ul style="list-style-type: none"> • Meets few criteria • Many errors that distract from paper focus
Avoids Plagiarism (10%)	10 9 8	7 6 5 4	3 2 1 0
<ul style="list-style-type: none"> • Correct use of in-text citations • Effective use of paraphrasing from articles using your own language 	<ul style="list-style-type: none"> • Meets all criteria at a high level • Clear citations and paraphrasing 	<ul style="list-style-type: none"> • Meets some criteria • Less effective and/or clear citations and paraphrasing 	<ul style="list-style-type: none"> • Meets few criteria • Ineffective and/or clear citations and paraphrasing

Performance Requirements and Student Services

Student Responsibilities

It is your responsibility as a student to contact the Office of the Registrar to complete the forms for Withdrawal or Change of Registration, and any other forms. Please refer to the list of important dates as noted in the Academic Schedule in the [Keyano College credit calendar](#). The Keyano College credit calendar also has information about Student Rights and Code of Conduct. It is the responsibility of each student to be aware of the guidelines outlined in the Student Rights and Code of Conduct Policies.

Student Attendance

Class attendance is useful for two reasons. First, class attendance maximizes a student's learning experience. Second, attending class is a good way to keep informed of matters relating to the administration of the course (e.g., the timing of assignments and exams). Ultimately, you are responsible for your own learning and performance in this course.

It is the responsibility of each student to be prepared for all classes. Students who miss classes are responsible for the material covered in those classes and for ensuring that they are prepared for the next class, including the completion of any assignments and notes that may be due.

Academic Misconduct

Students are considered to be responsible adults and should adhere to principles of intellectual integrity. Intellectual dishonesty may take many forms, such as:

- Plagiarism or the submission of another person's work as one's own;
- The use of unauthorized aids in assignments or examinations (cheating);
- Collusion or the unauthorized collaboration with others in preparing work;
- The deliberate misrepresentation of qualifications;
- The willful distortion of results or data;
- Substitution in an examination by another person;
- Handing in the same unchanged work as submitted for another assignment; and
- Breach of confidentiality.

The consequences for academic misconduct range from a verbal reprimand to expulsion from the College. More specific descriptions and details are found in the Student Rights and Code of Conduct section of the Keyano College credit calendar. It is the responsibility of each student to be aware of the guidelines outlined in the Student Rights and Code of Conduct Policies.

In order to ensure your understanding of the concept of plagiarism, [you must successfully complete the online tutorial found on \[ilearn.keyano.ca\]\(http://ilearn.keyano.ca\). Then print the certificate, sign it, and show it to each of your instructors.](#) Your course work may not be graded until you show this signed certificate.

Specialized Supports

The Student Services Department is committed to Keyano students and their academic success. There are a variety of student supports available at Keyano. Due to the continuing situation with the Covid-19 pandemic, the offered support services will be implemented through a model to respond to the restrictions in force at the time. In-person and virtual services will be offered. All Alberta Health Services guidelines will be followed for in-person appointments—wear a mask, maintain two meters of physical distance, use hand sanitizer, and stay home if you are unwell.

All student services are available during Keyano business hours: Monday to Friday, 8h30-16h30. The College is closed for statutory holidays. If you require support outside of regular business hours, please inform the support service team, and we will do our best to accommodate your needs.

Accessibility Services: provides accommodations for students with disabilities. Students with documented disabilities, or who suspect a disability, can meet with a Learning Strategist to discuss their current learning barriers and possible accommodations. Students who have accessed accommodations in the past are encouraged to contact us to request them for the semester. Please note that requesting accommodations is a process and requires time to arrange. Contact us as soon as you know you may require accommodations. For accessibility supports and to book an appointment, please contact accessibility.services@keyano.ca.

Accessibility Services also provides individual and group learning strategy instruction for all students, as well as technology training and supports to enhance learning. Meet with a Learning Strategist to learn studying and test-taking strategies for online classes. Schedule an appointment with the Assistive Technology Specialist to explore technology tools for learning. Book an appointment today by emailing accessibility.services@keyano.ca

Wellness Services: offers a caring, inclusive, and respectful environment where students can access free group and individual support to meet academic and life challenges. Mental Health Coordinators offer a safe and confidential environment to seek help with personal concerns. Students may access services virtually and in-person.

Wellness Services welcomes students to participate in any of the group sessions offered throughout the academic year addressing topics including mindfulness and test anxiety.

Individual appointments can be made by emailing wellness.services@keyano.ca.

Library Services: provides students with research and information supports as they engage in their studies. Library staff are available to support you both online and in-person throughout the semester. For a detailed list of library supports and services, go to www.keyano.ca/library. For all inquiries, please email askthelibrary@keyano.ca or chat with us online.

Begin your research with the [Library's FIND page](#). Search for information and sources for your assignments using the OneSearch, the Library's Catalogue, or by searching in a specific database selected from the [A-Z Database List](#).

Individual support with us is available. For support with citations, research and other information needs, appointments can be booked using the online [Book A Librarian Calendar](#). For support with Moodle, educational tools for assignments, Microsoft Office, Zoom, Teams and more, book an appointment using the online [Educational Technology Support Calendar](#).

Research and subject guides are helpful resources when beginning your research, assignment, using new educational technology, or addressing other information needs. To view a subject or course-specific guide, check out the complete listing of online [Subject Guides](#).

To access additional research resources, including Citation Guides (APA, MLA, Chicago, or IEEE), go to the [Research Help Library page](#).

The Loanable Technology collection is available to support students in their learning pursuits, whether online, in person or both. Items available for borrowing include mobile projectors, webcams, noise-cancelling headphones, Chromebooks, and laptops. For an up-to-date list of technology available for borrowing as well as support available, go to the Library's [Loanable Technology webpage](#).

Academic Success Centre: The Academic Success Centre is a learning space in the Clearwater Campus (CC-119) at Keyano College. Students can gather to share ideas, collaborate on projects, get new perspectives on learning from our Academic Content Specialists, or use the Centre's educational resources. The Academic Success Centre provides academic support services to students registered in credit programs at Keyano College in the form of individual tutoring, writing support groups, facilitated study groups, workshops, and study space. Services are **free** to Keyano students.

Academic Content Specialists are available in the areas of Math, Science, Human Services, and English/Humanities. This covers all courses offered at Keyano. The Academic Success Coach can also be found in the Academic Success Centre.

For the most up to date information on how to book a session, please view [the Keyano Academic Success Centre homepage](#).

Academic Integrity: The goal of the Academic Success Centre is to foster a student's ability to learn effectively and independently. Students registered at Keyano College are welcome to drop by the Centre to visit with any of our Academic Content Specialists to discuss their academic concerns.

Availability: Monday to Friday: 8:30 a.m. – 4:30 p.m. Flexible times may be available upon request. Virtual and in-person sessions, please email to get in contact with our Academic Content Specialists. For the most up to date information on how to book a session, please view the [Academic Success Centre homepage](#).

Academic Success Coach: offers you support and access to resources for your academic success to help you to find the Keys to your Success. The Academic Success Coach will work with you to develop an academic success plan, develop your study and time management skills, and connect you with the right resources here at Keyano. Academic.success@keyano.ca is the best way to access resources during blended service delivery. The Academic Success Coach is located in the Skill Centre in CC-119 at the Clearwater Campus.

E-Learning

Technology and internet will impact your online learning experience. It's important that you can watch an online video and other course materials, take online quizzes and participate in a live class with your instructor and other students. Live/virtual classes will be hosted in Microsoft Teams or Zoom.

For all course delivery types, you will access your course resources on Keyano's learning management system, **Moodle (iLearn)**. Login in using your [Keyano username and password](#).

Keyano College operates in a Windows based environment, and having the correct tools for online learning is important. Here's a list of recommended system requirements.

Internet Speed

Minimum Internet speeds of 10 Mbps.

Recommended Internet speeds of 25 Mbps (especially if you are sharing your internet at home).

Check your internet speed with Fast.com.

System requirements:

Microsoft Windows	Apple
<p>Minimum Requirements:</p> <p>A Windows 10 computer/laptop</p> <ul style="list-style-type: none"> · Minimum 4GB of RAM. · 10GB+ available hard drive storage. · Enough available hard drive space to install the Microsoft Office suite (approximately 3GB). <u>Microsoft Office</u> software is free to all Keyano students and employees. · Microphone, webcam and speakers. A headset with a microphone is recommended. · System updates must be regularly installed. · Anti-Virus / Anti-Malware software 	<p>Minimum Requirements:</p> <p>A Macintosh (V10.14 and above) computer/laptop</p> <ul style="list-style-type: none"> · Minimum 4GB of RAM. · 10GB+ available hard drive storage. · Enough available hard drive space to install the Microsoft Office suite (approximately 3GB). <u>Microsoft Office</u> software is free to all Keyano students and employees. · Microphone, webcam and speakers. A headset with a microphone is recommended. · System updates must be regularly installed. · Anti-Virus / Anti-Malware software.
<p>Recommended Requirements</p> <ul style="list-style-type: none"> · 8GB of RAM · A method of backing up/synchronizing to local or cloud-based storage such as OneDrive is highly recommended. This is included if you complete the setup of KeyanoMail and download MS Office using your Keyano email for free. 	<p>Recommended Requirements</p> <ul style="list-style-type: none"> · 8GB of RAM · A method of backing up/synchronizing to local or cloud-based storage such as OneDrive is highly recommended. This is included if you complete the setup of KeyanoMail and download MS Office using your Keyano email for free.
<p>Chromebooks are not recommended as they are not compatible with testing lockdown browsers.</p> <p>A Microsoft Surface or iPad or iPad Pro may be possible alternatives in some program areas.</p>	

Specific Department Requirements:

Business and OA programs require Windows 10.
Other programs may utilize Windows based tools as well.

Computer Software

Students will be able to get access to Microsoft Office 365 for free using Keyano credentials by [clicking here](#).

Recording of Lectures and Intellectual Property

Students may only record a lecture if explicit permission is provided by the instructor or by Accessibility Services. Even if students have permission to record a lecture or lecture materials, students may not share, distribute, or publish any of the lectures or course materials, this includes any recordings, slides, instructor notes, etc. on any platform. Thus no student is allowed to share, distribute, publish or sell course related content (instructor, or students) without permission. It is important to recognize that the Canadian Copyright Act contains provisions for intellectual property.

The [Academic Integrity Policy](#) provides additional information on Keyano College's expectations from students as members of the intellectual community.

ITS Helpdesk

If you are having issues with your student account, you can contact the ITS Helpdesk by emailing its.helpdesk@keyano.ca or calling 780-791-4965.