

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 are three components: Theory and Practice – patient care while transporting by air. The survival component consists of a 3-day theory and practical camp and will follow experiential learning concepts. Aeromedical orientation consists of a 24-hour onsite visit to an Aeromedical provider site. The student will complete assignments related to Aeromedical transport systems. This module starts after the theory and practice and the survival components are successfully completed.

Pre-requisites: ACP 501, ACP 502, ACP 503, ACP 505, ACP 506, ACP 507, ACP 508, ACP 509, ACP 510, ACP 516, ACP 517, and ACP 518

Co-requisites: ACP 511, 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.

*Resources and evidence-based practice provided by instructor – see Moodle.

Resources

Pollack A. N. McEvoy M. Rabrich J. S. Murphy M. & American Academy of Orthopaedic Surgeons. (2023). *Critical care transport* (3rd ed.). Jones & Bartlett Learning.

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

Grading System

Descriptor	Alpha Scale	4.0 Numeric Scale	Percentage
Excellent	A+	4.0	96-100
	A	4.0	90-95
	A-	3.7	85-89
Good	B+	3.3	80-84
	B	3.0	76-79
	B-	2.7	72-75
Satisfactory	C+	2.3	68-71
	C	2.0	64-67
	C-	1.7	60-63
Poor Minimum Pass	D+	1.3	55-59
	D	1.0	50-54
Failure	F	0	0-49

Relevant NOCP Competencies

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

Course Schedule for 2022

Classes	Subject	Modules
Class 1	Orientation and Introduction History of Aeromedical Services Helicopter Safety and Orientation	Syllabus Module 1 Module 2
Class 2	Fixed Wing Safety and Orientation	Module 3
TECH WEEK March 13-17, 2023 Lab will include aeromedical equipment and apply aeromedical concepts		
Class 3	Flight Philosophy	Module 4

Class 4	Patient Assessment, Preparation and Care	Module 5
Class 5	Managing Specific Patient Conditions	Module 6
<p>TECH WEEK April 11-21, 2023</p> <p>Lab will include aeromedical equipment and apply aeromedical concepts</p>		
<p>TECH WEEK May15-19, 2023</p> <p>Lab will include aeromedical equipment and apply aeromedical concepts</p>		

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 in Moodle	30%
Participation Attendance for lectures and flight orientation require full attendance. Details regarding flight hours TBA.	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

As a student, it is your responsibility to contact the Office of the Registrar to complete the required forms, including the Withdraw Course or Program or a Change of Registration form. Please refer to the important dates listed in the Academic Schedule in the [Keyano College credit calendar](#). The Keyano College credit calendar also has information about Student Rights and the Code of Conduct. It is the responsibility of each student to be aware of the guidelines outlined in the Student Rights and the Code of Conduct Policies.

Student Attendance

Class attendance is helpful for two reasons: First, class attendance maximizes a student's learning experience. Second, attending class is an excellent way to keep informed of matters relating to the course administration (e.g., the timing of assignments and exams). Ultimately, you are responsible for your learning and performance in this course. It is the responsibility of each student to be prepared for all classes. Absent students are responsible for the material covered in those classes, and students must ensure they are ready for their next class, including completing any missed assignments and notes.

Academic Misconduct

Students are considered responsible adults and should adhere to the principles of intellectual integrity. Intellectual dishonesty takes many forms:

- Plagiarism or the submission of another person's work as their 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,
- Submitting unchanged work 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. To ensure your understanding of plagiarism, you may be required to complete the online [Understanding Plagiarism tutorial](#) and submit the certificate of completion.

Online Learning

Technology and internet connectivity will impact your online learning experience. You may be required to watch online videos, take online quizzes, or participate in live online classes. Live/virtual courses 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 access to the correct tools for online learning is essential.

Internet Speed

Minimum download and upload speeds of 10 Mbps. Recommended download speeds of 25 Mbps and upload speeds of 10 Mbps (if you are sharing your internet at home). You can check your internet speed with [Speedtest by Ookla](#).

Computer System Requirements

Keyano College software are Windows based.

Minimum Requirements and Recommended Upgrades for Windows (preferred system) and Apple devices

These minimum standards are required for a Windows computer/laptop (OS 10 or 11) and a Macintosh (OS 10.14 or above).

1. Windows 10 Operating System or above
2. 4GB of RAM. Recommended upgrade to 8GB of RAM.
3. 10GB+ available hard drive storage space. Note installing Microsoft Office 365 requires 3GB of available hard drive space.
 - a. Install the Microsoft Office 365 suite (~3GB) *
4. Microphone, webcam, and speakers (All modern laptops have these three accessories built-in. However, a headset or earbuds with a microphone is also recommended.
5. Windows has built-in anti-virus/malware software. It is essential to install system updates to keep your device secured regularly.

*[Microsoft Office 365](#) is free to Keyano students.

Tablets, iPads, and Chromebooks are **not** recommended: they may not be compatible with the testing lockdown browsers and Microsoft Office 365.

Specific Department Requirements

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

Computer Software

Students have access to Microsoft Office 365 and Read & Write for free using Keyano credentials.

See [Recommended Technology](#) for more information.

Recording of Lectures and Intellectual Property

Students may only record a lecture if explicit permission is provided by the instructor or 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 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 have issues with your student account, you can contact the ITS Helpdesk by emailing its.helpdesk@keyano.ca or calling 780-791-4965.

Specialized Supports

The Student Services Department is committed to Keyano students and their academic success. There is a variety of student support available at Keyano. All student services are available during Keyano business hours: Monday to Friday, 8:30 a.m. to 4:30 p.m. The College is closed on statutory holidays. If you require support outside of regular business hours, please inform the support service team, and they will do their best to accommodate your needs.

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

Accessibility Services also provides individual and group learning strategy instruction for all students and technology training and support to enhance learning. You can meet with an Access Strategist to learn studying and test-taking strategies. In addition, you can 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 provide a safe and confidential environment for you to seek help with personal concerns. Our Wellness Navigator offers support with basic needs such as housing, financial and nutritional support, and outside referrals when needed. Wellness Services welcomes students to participate in group sessions that address topics including mindfulness and test anxiety throughout the academic year. Individual appointments can be made by emailing wellness.services@keyano.ca.

Library Services provides students with research, information, and educational technology supports as they engage in their studies. Library staff are available to help you online and in person throughout the semester. Librarians offer individual and small group consultations booked using the online [Book A Librarian calendar](#). The library also provides virtual research and subject guides to help you with your studies. Find the guide that supports your course-related research by viewing the complete list of online [Subject Guides](#). To start your research and access citation guides (APA, MLA, Chicago, or IEEE), visit the [Research Help page](#). The library's collections (including print and online materials) are searchable using [OneSearch](#). The library offers a Loanable Technology collection to support students accessing and using technology. For an up-to-date list of technology available for borrowing, visit the library's [Loanable Technology webpage](#). For a detailed list of library resources and services, go to www.keyano.ca/library. For all inquiries, please email askthelibrary@keyano.ca or [chat with us online](#).

The **Academic Success Centre** at Keyano College (CC-119) provides **free** academic support services to registered students, such as tutoring, writing support, facilitated study groups, workshops, and study space. Academic Content Specialists are available in Mathematics, Science, Trades, Power Engineering, Upgrading/College Prep, Human Services, English, Humanities, and more. Students are encouraged to visit the Academic Success Centre to discuss study strategies and academic concerns. For additional information, please email Academic.Success@keyano.ca.

The **Academic Success Coach** is located in the Academic Success Centre and works with students to develop academic success plans, time management skills, study strategies, and homework plans. For additional information, please email Academic.Success@keyano.ca.

Authorization

This course outline has been reviewed and approved by the Program Chair.

[Trevor, Rivers], Instructor

[Candi, Muise], Chair

Date Authorized

[Arlene, Starks], Dean

Date Authorized

Signed copies to be delivered to:

Instructor