

FOR APPROVAL**PUBLIC****OPEN SESSION**

TO: UTSC Academic Affairs Committee

SPONSOR: Prof. Karin Ruhlandt, Vice-Principal, Academic & Dean
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PRESENTER: Prof. Katherine R. Larson, Vice-Dean, Teaching, Learning & Undergraduate Programs
CONTACT INFO: vdundergrad.utsc@utoronto.ca

DATE: April 22, 2026 for April 29, 2026

AGENDA ITEM: 9

ITEM IDENTIFICATION:

Undergraduate Major Modification: Joint Program for UTSC Specialist Program in Paramedicine with Centennial College Paramedic

JURISDICTIONAL INFORMATION:

The UTSC Academic Affairs Committee (AAC) “is concerned with matters affecting the teaching, learning, and research functions of the campus (AAC Terms of Reference, Section 4).” Under Section 5.6 of its Terms of Reference, the AAC is responsible for the approval of “major and minor modifications to existing degree programs.”

The AAC has responsibility for the approval of major and minor modifications to existing programs as defined by the [University of Toronto Quality Assurance Process](#) (UTQAP, Sections 3.1 and 3.3).

GOVERNANCE PATH:

1. UTSC Academic Affairs Committee [For Approval] (April 29, 2026)

PREVIOUS ACTION TAKEN:

No previous action in governance has been taken on this item.

HIGHLIGHTS:

This proposal outlines key changes to the Joint Paramedicine Specialist program, including updated program learning outcomes reflecting the program's shift to health and society focus, the removal of

biology courses that overlapped with Centennial College's Paramedic program, and the addition of two new required courses.

Following the program's transfer from the Department of Biological Sciences to the Department of Health and Society, new program learning outcomes have been developed to reflect this shift. The updated outcomes focus on health, health care, health policy, health systems, research, interprofessional collaboration, leadership and advocacy. In turn, these outcomes necessitate a transition away from courses emphasizing biological sciences toward courses aligned with a health and society focus.

Two new courses have been incorporated as required courses in the program: HLTB80H3 Paramedicine as a Community Based Health and Social Service (approved in the 2024-25 governance year) and HLTB27H3 Applied Statistics for Public Health (approved in the 2023-24 governance year).

No changes are proposed for the Centennial portion of the joint program's course offerings or sequence. All degree requirements, including C- and D-level course requirements, are met within the proposal.

This proposal was developed through consultation with four key stakeholder groups. UTSC's Department of Health and Society's Curriculum Committee reviewed and approved the proposed modifications, with final adjustments approved on January 20, 2026. Centennial College stakeholders (including faculty, the Coordinator, Chair, Dean, and Joint Programs Leadership) reviewed the proposal in December 2025 and provided their approval on January 14, 2026. The Joint Programs Steering Committee was updated on the proposal in November 2025, and the Dean's Office was consulted regularly throughout 2024, 2025 and 2026.

FINANCIAL IMPLICATIONS:

There are no financial implications to the campus' operating budget.

RECOMMENDATION:

Be It Resolved,

THAT the major modification proposal for the Joint Specialist in Paramedicine as described in the proposal dated April 22, 2026, be approved effective September 1, 2026.

DOCUMENTATION PROVIDED:

1. Major Modification Proposal: to introduce revised program learning outcomes, updated course requirements, and two new courses in the Joint Specialist in Paramedicine in the Honours Bachelor of Science (HBSoc) at the University of Toronto Scarborough (UTSC) and the Paramedic Diploma (Centennial College) (April 9, 2026).



University of Toronto

Major Modification Proposal: Significant Modifications to Existing Undergraduate and Graduate Programs

Program being modified: Please specify what program and which components of that are being modified; e.g., Specialist in History; Master of Environmental Science	Specialist (Joint) in Paramedicine (Honours Bachelor of Science)
Program of Study Code(s):	SCSPEPMD
Proposed major modification:	Program content, requirements, sequence, and structure
Department/unit (if applicable):	Department of Health and Society
Faculty/division:	University of Toronto Scarborough
Dean's office contact:	Suzanne Sicchia, Associate Dean, Undergraduate Programs & Curriculum (adundergrad.utsc@utoronto.ca) Kevin Mak, Manager, Academic Program Reviews & Quality Assurance (kevin.mak@utoronto.ca)
Proponents:	Michelle Silver, Chair, Department of Health and Society (michelle.silver@utoronto.ca) Walter Tavares, Assistant Professor, Health Professions and Practice, Department of Health and Society (walter.tavares@utoronto.ca)
Version date: Please update as you edit this proposal.	April 9, 2026

Framework for UTQAP Major Modifications

The [University of Toronto Quality Assurance Process](#) (UTQAP) supports a structured approach for creating, reflecting on, assessing and developing plans to change and improve academic programs and units in the context of institutional and divisional commitments and priorities.

The University of Toronto (U of T), in its [Statement of Institutional Purpose](#) (1992), articulates its mission as a commitment "to being an internationally significant research university, with undergraduate, graduate, and professional programs of excellent quality." Thus "quality assurance through assessment of new program proposals and review of academic programs and units in which they reside is a priority for the University...."

The quality of the scholarship of the faculty, and the degree to which that scholarship is brought to bear in teaching are the foundations of academic excellence. More generally, all of the factors that contribute to collegial and scholarly life — academic and administrative complement, research and scholarly activity, infrastructure, governance, etc. — bear on the quality of academic programs and the broad educational experience of students. ([Policy for Approval and Review of Academic Programs and Units](#) (2010))

The University's approach to quality assurance is built on two primary indicators of academic excellence: the quality of the scholarship and research of faculty; and the success with which that scholarship and research is brought to bear on the achievement of Degree Level Expectations. These indicators are assessed by determining how our scholarship, research and programs compare to those of our international peer institutions and how well our programs meet their Degree Level Expectations.

The University of Toronto embraces academic change as a critical part of maintaining and enhancing programs of outstanding quality through a process of continuous improvement. Proposals for major modifications are vehicles of academic change.

Major Modification Proposal

A major modification to an existing program is a restructuring of a program, a merger of or the creation of new elements within existing programs, or a renewal of a program in order to keep it current with its academic discipline or improve student academic experience.

This template should be used to bring forward all proposals for major modifications to **existing** undergraduate and graduate programs for governance approval under the [University of Toronto Quality Assurance Process](#) (UTQAP). In cases where it is unclear whether a proposed change

in a program is a new program, a major modification, or a minor modification, a determination will be made by the Vice-Provost, Academic Programs in consultation with the divisional Dean and the academic unit.

This template aligns with UTQAP requirements and will help to ensure that all evaluation criteria established by the Quality Council are addressed in bringing forward a proposal. Divisions may have additional requirements that should be integrated into the proposal. Examples of major modifications are provided in [UTQAP 3.1](#). See the [VPAP website](#) for more information on major modifications.

Development and Approval Steps	Date (e.g., of final sign off, governance meeting, inclusion in reports)
Dean's office sign-off	January 26, 2026
VPAP sign-off	April 9, 2026
Unit-level approval (if required)	January 20, 2026
Faculty/divisional governance	April 29, 2026
Faculty/division submits final proposal to VPAP	April 30, 2026
Included in Major Modification Report to AP&P	May 12, 2026
Included in Major Modification Report to Quality Council	July 2026

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1 Executive Summary

Please provide a brief summary of the change(s) being proposed.

On January 12, 2023, the University of Toronto Scarborough (UTSC) received the results of an UTQAP cyclical review external report of the Paramedicine program offered jointly between UTSC and Centennial College. Several recommendations were identified, including that the Paramedicine program be moved from the Department of Biological Sciences to the Department of Health and Society (DHS) to better reflect the profession's position and trajectory in the healthcare system as a community-based health and social service, and ultimately the needs of students. Other recommendations concerned changes to courses and sequencing, the need to better support student transitions between institutions, and a greater focus on content included in the DHS. **On July 1, 2023, the Paramedicine program was administratively transferred from the Department of Biological Sciences to DHS.** This proposal marks the proposed program modifications to (a) support the recommendation of the external review and (b) align with necessary changes following a comprehensive review of program content and pathways.

This program modification proposal, which was jointly developed by UTSC and Centennial College, includes:

1. **New program learning outcomes:** As a result of the program's transfer from the Department of Biological Sciences to the Department of Health and Society, new program learning outcomes have been developed. Generally, these focus on health, health care, health policy, health systems, research, interprofessional collaboration, leadership and advocacy.
2. **A content shift from BIO to HLT:** The proposed new outcomes obligate a transition in courses emphasizing biological sciences to courses and a pathway consistent with a health and society focus; All UTSC Biology (BIO) courses except for BIOA11H3 have been replaced with HLT courses.
3. **Two new courses will become mandatory for the program:** HLTB80H3 – Paramedicine as a Community Based Health and Social Service (approved in the 2024-25 governance year) and HLTB27H3 – Applied Statistics for Public Health (approved in the 2023-24 governance year) will be required in the program.
4. **Removal of PSY course:** Of the existing four PSY course options, three will remain. PSYB20H3 – Introduction to Clinical Psychology has been replaced with an HLT credit.

See Appendix 1 for a side-by-side comparison of the existing and proposed program structures, course lists, and sequencing.

- a. No changes are proposed for the Centennial portion of the course offerings or sequence. All degree requirements (e.g., requirements for C and D level courses) are accounted for in our program/proposal.
- b. The “suggested course sequence” (as shown in the current calendar and the new proposed copy) represents the “ideal” pathway through the program to enable degree/diploma completion within 4 years and without summer course obligations. Both current and proposed course sequences include semesters where students are enrolled in both Centennial and UTSC courses. Some students follow this route while others prefer to take UTSC courses in summer sessions and focus solely on Centennial courses during those Fall/Winter terms (we support and encourage the latter route.) There are many different possible pathways through the program and alternate pathways are extremely common due to the nature of the courses/program. This will not change as a result of our proposed modifications. A scan of students currently enrolled in PMD courses, which are taught at Centennial, shows approximately 50% of them have chosen to enroll only in the PMD courses and fulfill UTSC course requirements in summer while 50% have chosen dual enrollment with both PMD and UTSC courses during Fall/Winter terms.

2 Effective Date

Please indicate when students may first be enrolled in the changed program or new option. If creating something new within a program, please state when the new option will first be reviewed and through which unit.

Students may first be enrolled in the new program beginning on September 1, 2026 (Fall session).

3 Current Calendar Copy with Changes Tracked or Highlighted

Insert calendar copy, including the program description, with all changes tracked or highlighted.

3.1. Current Calendar Copy

SPECIALIST (JOINT) PROGRAM IN PARAMEDICINE (SCIENCE)

Supervisor: W. Tavares paramedicine@utsc.utoronto.ca

The Specialist (Joint) Program in Paramedicine is administered by the Department of Health and Society. Students who complete the requirements of the program will also qualify for the Paramedic Diploma from Centennial College. Students who have completed the requirements for Centennial's diploma are eligible to take the Ministry of Health exams required to qualify as a Primary Care Paramedic.

Enrolment Requirements

This program has limited enrolment. Applicants must fill out a Paramedicine Declaration form. Prior to taking courses at Centennial College, students must also fill out a medical certificate and have current qualifications in CPR and standard first aid. Other non-academic requirements such as a vulnerable sector police check, fitness standards and face mask fit certification will also ultimately be required. Additional details regarding these requirements may be found at Centennial's website. Applicants may arrange to complete some of these requirements during their first year of study at the University of Toronto Scarborough. For more information on admission and deadlines, see the [Joint Programs with Centennial College](#) section of this *Calendar*.

Program Requirements

This program requires the completion of 16.5 credits. Including electives, students should take 2.5 credits in each semester of their four-year degree.

Note: three of the PMD courses are 1.0 credit (Y courses) rather than 0.5 credit (H courses).

1. 1.0 Credit of Introductory Biology Courses

BIOA01H3 Life on Earth: Unifying Principles

BIOA02H3 Life on Earth: Form, Function and Interactions

2. 1.5 Credits of Core Biology Courses

BIOB10H3 Cell Biology
BIOB11H3 Molecular Aspects of Genetic Processes
BIOB34H3 Animal Physiology

3. 1.5 Credits of Foundational Biology Courses

BIOC17H3 Microbiology
[BIOC21H3 Vertebrate Histology: Cells and Tissues or BIOC32H3 Human Physiology I]
BIOC34H3 Human Physiology II

4. 1.0 Credit of Advanced Biology Courses

Choose From:

BIOD17H3 Seminars in Cellular Microbiology
BIOD26H3 Fungal Biology and Pathogenesis
BIOD29H3 Pathobiology of Human Disease
BIOD33H3 Comparative Animal Physiology
BIOD43H3 Animal Movement and Exercise
BIOD65H3 Pathologies of the Nervous System
BIOD96Y3 Directed Research in Paramedicine

5. 1.0 Credit of Introductory Chemistry Courses

CHMA10H3 Introductory Chemistry I: Structure and Bonding
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms

6. 1.0 Credit of Introductory Psychology Courses

PSYA01H3 Introduction to Biological and Cognitive Psychology
PSYA02H3 Introduction to Clinical, Developmental, Personality and Social Psychology

7. 1.0 Credit of B-Level Psychology Courses

PSYB20H3 Introduction to Developmental Psychology
PSYB32H3 Introduction to Clinical Psychology

8. 1.0 Credit of Statistics/Data Analysis Courses

[STAB22H3 Statistics I or PSYB07H3 Data Analysis in Psychology]
PSYC08H3 Advanced Data Analysis in Psychology

9. 7.5 Credits of Paramedicine Courses

*PMDB22H3 Pre-Hospital Care 1: Theory and Lab
*PMDB25H3 Therapeutic Approaches to Behaviour in Crisis
*PMDB30H3 Alterations of Human Body Function I
*PMDB32Y3 Pre-Hospital Care 2: Theory, Lab and Clinical
*PMDB33H3 Anatomy
*PMDB36H3 Pharmacology for Allied Health Pre-requisite

- *PMDB41H3 Professional Issues, Research and Leadership
- *PMDC40H3 Alterations in Human Body Function II
- *PMDC42Y3 Pre-Hospital Care 3: Theory, Lab and Field
- *PMDC43H3 Medical Directed Therapeutics and Paramedic Responsibilities
- *PMDC54Y3 Pre-Hospital Care 4: Theory, Lab and Field
- *PMDC56H3 Primary Care Practice Integration and Decision Making

*A grade of 60% is required in these courses both to pass the course and to maintain standing in the program. All PMD courses are taught at Centennial College. Note, some PMD courses require that 60% be achieved in all components of the course (i.e., lecture component, practical component, and clinical-placement component).

Note: In order to remain in the program, students must typically maintain a cumulative GPA of at least 2.0. Students whose cumulative GPA falls below 2.0 should consult the program supervisor to discuss their options. Please also note, space in some Centennial College courses is limited. Students who must repeat one of these courses and whose cumulative GPA has fallen below 2.0 will be allowed to register in these courses only if space permits

Suggested Course Sequence

*Year 1: Fall Semester**

1. [BIOA01H3](#) Life on Earth: Unifying Principles
2. [CHMA10H3](#) Introductory Chemistry I: Structure and Bonding
3. [PSYA01H3](#) Introduction to Biological and Cognitive Psychology

*Year 1: Winter Semester**

1. [BIOA02H3](#) Life on Earth: Form, Function and Interactions
2. [CHMA11H3](#) Introductory Chemistry II; Reactions and Mechanisms
3. [PSYA02H3](#) Introduction to Clinical, Developmental, Personality and Social Psychology

*In Year 1 students must also complete 0.5 credit in statistics [[STAB22H3](#) Statistics I or [PSYB07H3](#) Data Analysis in Psychology].

Year 2: Fall Semester

1. [BIOB10H3](#) Cell Biology
2. [PMDB33H3](#) Anatomy
3. [PMDB22H3](#) Pre-Hospital Care 1: Theory and Lab
4. [PMDB25H3](#) Therapeutic Approaches to Behaviour in Crisis
5. [PMDB41H3](#) Professional Issues, Research and Leadership

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Year 2: Winter Semester

1. [BIOB11H3](#) Molecular Aspects of Genetic Processes
2. [PMDB30H3](#) Alterations of Human Body Function I
3. [PMDB32Y3](#) Pre-Hospital Care 2: Theory, Lab and Clinical
4. [PMDB36H3](#) Pharmacology for Allied Health Pre-requisite

Year 3: Fall Semester

1. [BIOB34H3](#) Animal Physiology
2. [PMDC40H3](#) Alterations in Human Body Function II
3. [PMDC42Y3](#) Pre-Hospital Care 3: Theory, Lab and Field
4. [PMDC43H3](#) Medical Directed Therapeutics and Paramedic Responsibilities

Year 3: Winter Semester

1. [BIOC17H3](#) Microbiology
2. [BIOC34H3](#) Human Physiology II
3. [PMDC54Y3](#) Pre-Hospital Care 4: Theory, Lab and Field
4. [PMDC56H3](#) Primary Care Practice Integration and Decision Making

Year 4: Fall Semester

1. [BIOC21H3](#) Vertebrate Histology: Cells and Tissues or [BIOC32H3](#) Human Physiology I
2. [PSYB20H3](#) Introduction to Developmental Psychology
3. [PSYB32H3](#) Abnormal Psychology
4. [[BIOD33H3](#) Comparative Animal Physiology or [BIOD65H3](#) Pathologies of the Nervous System or [BIOD26H3](#) Fungal Biology and Pathogenesis or [BIOD96Y3](#) Directed Research in Paramedicine*]

Year 4: Winter Semester

1. [PSYC08H3](#) Advanced Data Analysis in Psychology
2. [BIOD17H3](#) Seminars in Cellular Microbiology or [BIOD43H3](#) Animal Movement and Exercise or [BIOD29H3](#) Pathobiology of Human Disease
3. 0.5 credits of elective courses

*Students may take any 2 of the D-level courses listed above to meet program requirements. The sequence here merely reflects the current scheduling of courses in the various sessions.

3.2. (new proposed structure and calendar copy)

NEW PROPOSED:

SPECIALIST (JOINT) PROGRAM IN PARAMEDICINE (SCIENCE)

Supervisor: W. Tavares

Program Coordinator: Jenn Chaskavich (paramedicine.utsc@utoronto.ca)

The Honours Specialist (Joint) Program in Paramedicine is administered by the Department of Health and Society. Students who complete the requirements of the program will qualify for an Honours Bachelor of Science degree and an Ontario College Diploma in Paramedicine from Centennial College. This ensures students are provided with theoretical breadth related to health and society and the practical knowledge, skills, and eligibility to take the Ministry of Health exam required to qualify as a Primary Care Paramedic in Ontario.

Enrolment Requirements

This program has limited enrolment. Applicants must fill out a Paramedicine Declaration Form that outlines additional details about their enrolment. Prior to taking courses at Centennial College, students must also fill out a medical certificate and have current qualifications in CPR and Standard First Aid. Other non-academic requirements such as a vulnerable sector police check, fitness standards, F-class driving licensure, and face mask fit certification will also ultimately be required. Additional details regarding these requirements may be found at Centennial College's website. Applicants may arrange to complete some of these requirements during their first year of study at the University of Toronto Scarborough. For more information on admission and deadlines, see the Joint Programs section of the UTSC Calendar.

Program Requirements

This program requires 17.0 core credits. Additional electives and breadth courses are required as part of overall degree requirements (see the [Academic Calendar page on Degree Requirements](#) for details). Students should take 2.5 credits in each semester of their four-year degree.

Note: Three PMD courses and two HLTD-level research course options are 1.0 (Y) credit.

0.5 Credit of Introductory Biology Course

BIOA11H3 Introduction to the Biology of Humans

1.0 Credit of Introductory Psychology Courses

PSYA01H3 Introduction to Biological and Cognitive Psychology

PSYA02H3 Introduction to Clinical, Developmental, Personality and Social Psychology

0.5 Credit of B-Level Psychology Courses

PSYB32H3 Introduction to Clinical Psychology

1.5 Credits of Introductory Health and Society Courses

HLTA02H3 Exploring Health and Society: Theories, Perspectives, and Patterns

HLTA03H3 Navigating Health and Society: Research, Practice, and Policy

HLTA20H3 Physiology Through the Life Course: From Birth Through Death

1.0 Credit of Statistics Courses

STAB23H3 Introduction to Statistics for the Social Sciences

HLTB27H3 Applied Statistics for Public Health

3.0 Credits of Core Health & Society Courses

HLTB15H3 Health Research Methodology

HLTB16H3 Public Health

HLTB40H3 Health Policy and Health Systems

HLTB41H3 Social Determinants of Health

HLTB80H3 Paramedicine as a Community Based Health and Social Service

HLTC81H3 Health Professions and Practice

1.0 Credit from the following C-Level HLT courses

HLTC19H3 Chronic Diseases

HLTC22H3 Health, Aging, and the Life Cycle

HLTC27H3 Community Health and Epidemiology

HLTC42H3 Emerging Health Issues and Policy Needs

1.0 credit from the following D-level HLT courses, including at least one *research-based course:

HLTD02H3 Health Research Seminar (*research-based course)

HLTD05H3 Directed Research on Health Services and Institutions (*research-based course)

HLTD71Y3 Directed Research in Health and Society (*research-based course)

HLTD80H3 Critical Health Education

HLTD81H3 Health Professions Education

HLTD82H3 Solving Black Health Disparities: Education and Promotion

HLTD96Y3 Directed Research in Paramedicine (*research-based course)

7.5 Credits of Paramedicine Courses

*PMDB22H3 Pre-Hospital Care 1: Theory and Lab

*PMDB25H3 Therapeutic Approaches to Behaviour in Crisis

*PMDB30H3 Alterations of Human Body Function I

- *PMDB32Y3 Pre-Hospital Care 2: Theory, Lab and Clinical
- *PMDB33H3 Anatomy
- *PMDB36H3 Pharmacology for Allied Health Pre-requisite
- *PMDB41H3 Professional Issues, Research and Leadership
- *PMDC40H3 Alterations in Human Body Function II
- *PMDC42Y3 Pre-Hospital Care 3: Theory, Lab and Field
- *PMDC43H3 Medical Directed Therapeutics and Paramedic Responsibilities
- *PMDC54Y3 Pre-Hospital Care 4: Theory, Lab and Field
- *PMDC56H3 Primary Care Practice Integration and Decision Making

Recommended Course Sequence:

*Please note: We recommend that, where possible, students complete UTSC courses during Summer terms to avoid taking courses at both Centennial and UTSC during the Fall/Winter. Please consult the Program Coordinator for help with navigating your pathway through this program.

First Year

5.0 credits as follows:

BIOA11H3 Introduction to the Biology of Humans
HLTA02H3 Exploring Health and Society: Theories, Perspectives, and Patterns
HLTA03H3 Navigating Health and Society: Research, Practice, and Policy
HLTA20H3 Physiology Through the Life Course: From Birth Through Death
HLTB80H3 Paramedicine as a Community-Based Health and Social Service
PSYA01H3 Introduction to Biological and Cognitive Psychology
PSYA02H3 Introduction to Clinical, Developmental, Personality and Social Psychology
STAB23H3 Introduction to Statistics for the Social Sciences
1.0 additional elective credits

Second Year

5.0 credits as follows:

*PMDB22H3 Pre-Hospital Care 1: Theory and Lab
*PMDB25H3 Therapeutic Approaches to Behaviour in Crisis
*PMDB33H3 Anatomy
*PMDB41H3 Professional Issues, Research and Leadership
*PMDB30H3 Alterations of Human Body Function I
*PMDB32Y3 Pre-Hospital Care 2: Theory, Lab and Clinical
*PMDB36H3 Pharmacology for Allied Health Pre-requisite
HLTB15H3 Health Research Methodology
HLTB40H3 Health Policy and Health Systems

Third Year

5.0 credits as follows:

*PMDC40H3 Alterations in Human Body Function II
*PMDC42Y3 Pre-Hospital Care 3: Theory, Lab and Field
*PMDC43H3 Medical Directed Therapeutics and Paramedic Responsibilities
*PMDC54Y3 Pre-Hospital Care 4: Theory, Lab and Field
*PMDC56H3 Primary Care Practice Integration and Decision-Making
HLTB16H3 Public Health
HLTB41H3 Social Determinants of Health
0.5 elective credit

Fourth Year

5.0 credits as follows:

HLTB27H3 Applied Statistics for Public Health
HLTC81H3 Health Professions and Practice
PSYB32H3 Introduction to Clinical Psychology

1.0 credit from the following:

HLTC19H3 Chronic Diseases
HLTC22H3 Health, Aging, and the Life Cycle
HLTC27H3 Community Health and Epidemiology
HLTC42H3 Emerging Health Issues and Policy Needs

1.0 credit from the following that includes at least one *research-based course:

HLTD02H3 Health Research Seminar (*research-based course)
HLTD05H3 Directed Research on Health Services and Institutions (*research-based course)
HLTD71Y3 Directed Research in Health and Society (*research-based course)
HLTD80H3 Critical Health Education
HLTD81H3 Health Professions Education
HLTD82H3 Solving Black Health Disparities: Education and Promotion
HLTD96Y3 Directed Research in Paramedicine (*research-based course)

1.5 additional elective credits

*Students are encouraged to consider the routes and threads available through the Department (e.g., Aging, Development and the Lifespan; Body Systems; Contemporary Issues in Health; Disability, Ableism, and Health Humanities; and more). See <https://utsc.calendar.utoronto.ca/section/health-studies>.

*A grade of 60% is required in PMD courses both to pass the course and to maintain standing in the program. All PMD courses are taught at Centennial College. Note, that some PMD courses require that 60% or a “pass” be achieved in all components of the course (i.e., lecture component, practical component, and clinical-placement component).

Note: To remain in the program, students must maintain a cumulative GPA of at least 2.0. Students whose cumulative GPA falls below 2.0 should consult the program supervisor to discuss their options. Please also note, space in some Centennial College courses is limited. Students who must repeat one of these courses and whose cumulative GPA has fallen below 2.0 will be allowed to register in these courses only if space permits.

Prospective students with a recognized Diploma from Centennial College or other publicly funded and approved College in Ontario can be considered for enrollment in this Specialist program. Course credit will be considered for PMD credits listed above.

3.3. (new proposed structure reflected using track changes to existing calendar copy)

SPECIALIST (JOINT) PROGRAM IN PARAMEDICINE (SCIENCE)

Supervisor: W. Tavares

Program Coordinator: Jenn Chaskavich (paramedicine.uts@utoronto.ca)

The **Honours** Specialist (Joint) Program in Paramedicine is administered by the Department of Health and Society. Students who complete the requirements of the program will **also** qualify for **an Honours Bachelor of Science degree and an Ontario College Paramedicine** ~~the Paramedic Diploma in~~ from Centennial College. **This ensures students are eligible provided with theoretical breadth related to health and society and the practical knowledge, skills, and eligibility** ~~Students who have completed the requirements for Centennial's diploma are eligible~~ to take the Ministry of Health exams required to qualify as a Primary Care Paramedic **in Ontario**.

Enrolment Requirements

This program has limited enrolment. Applicants must fill out a Paramedicine Declaration **F**orm **that outlines additional details about their enrolment**. Prior to taking courses at Centennial College, students must also fill out a medical certificate and have current qualifications in CPR and **s**tandard **f**irst **a**id. Other non-academic requirements such as a vulnerable sector police check, fitness standards, **F-class driving licensure**, and face mask fit certification will also ultimately be required. Additional details regarding these requirements may be found at Centennial **College's** website. Applicants may arrange to complete some of these requirements during their first year of study at the University of Toronto Scarborough. For more information on admission and deadlines, see the Joint Programs ~~with Centennial College~~ section of **this the UTSC** Calendar.

Program Requirements

This program requires ~~the completion of 16.5 credits~~ 17.0 core credits. ~~Including~~ Additional electives and breadth courses are required as part of overall degree requirements (see the [Academic Calendar page on Degree Requirements](#) for details). ~~Including electives, s~~ Students should take 2.5 credits in each semester of their four-year degree.

Note: ~~t~~ Three ~~of the~~ PMD courses and two HLTD-level research course options are 1.0 (Y) credit (~~Y courses~~) rather than 0.5 credit (~~H courses~~).

10.5 Credit of Introductory Biology Courses:

~~BIOA01H3 Life on Earth: Unifying Principles~~

~~BIOA02H3 Life on Earth: Form, Function and Interactions~~

~~2. 1.5 Credits of Core~~ BIOA11H3 Introduction to the Biology Courses of Humans

~~BIOB10H3 Cell Biology~~

~~BIOB11H3 Molecular Aspects of Genetic Processes~~

~~BIOB34H3 Animal Physiology~~

~~3. 1.5 Credits of Foundational Biology Courses~~

~~BIOC17H3 Microbiology~~

~~[BIOC21H3 Vertebrate Histology: Cells and Tissues or BIOC32H3 Human Physiology I]~~

~~BIOC34H3 Human Physiology II~~

~~4. 1.0 Credit of Advanced Biology Courses~~

~~Choose From:~~

~~BIOD17H3 Seminars in Cellular Microbiology~~

~~BIOD26H3 Fungal Biology and Pathogenesis~~

~~BIOD29H3 Pathobiology of Human Disease~~

~~BIOD33H3 Comparative Animal Physiology~~

~~BIOD43H3 Animal Movement and Exercise~~

~~BIOD65H3 Pathologies of the Nervous System~~

~~BIOD96Y3 Directed Research in Paramedicine~~

~~5. 1.0 Credit of Introductory Chemistry Courses~~

~~CHMA10H3 Introductory Chemistry I: Structure and Bonding~~

~~CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms~~

1.05 Credits of Introductory Psychology Courses

PSYA01H3 Introduction to Biological and Cognitive Psychology

PSYA02H3 Introduction to Clinical, Developmental, Personality and Social Psychology

4.0.5 Credit of B-Level Psychology Courses

~~PSYB20H3 Introduction to Developmental Psychology~~

PSYB32H3 Introduction to Clinical Psychology

1.5 Credits of Introductory Health and Society Courses

HLTA02H3 Exploring Health and Society: Theories, Perspectives, and Patterns

HLTA03H3 Navigating Health and Society: Research, Practice, and Policy

HLTA20H3 Physiology Through the Life Course: From Birth Through Death

1.0 Credit of Statistics/Data Analytics Courses

STAB23H3 Introduction to Statistics for the Social Sciences ~~or PSYB07H3 Data Analysis~~

HLTB27H3 Applied Statistics for Public Health

3.0 Credits of Core Health & Society Courses

HLTB15H3 Health Research Methodology

HLTB16H3 Public Health

HLTB40H3 Health Policy and Health Systems

HLTB41H3 Social Determinants of Health

HLTB80H3 Paramedicine as a Community Based Health and Social Service

HLTC81H3 Health Professions and Practice

1.0 Credit from the following C-Level HLT courses:

HLTC19H3 Chronic Diseases

HLTC22H3 Health, Aging, and the Life Cycle

HLTC27H3 Community Health and Epidemiology

HLTC42H3 Emerging Health Issues and Policy Needs

1.0 credit from the following D-level HLT courses, including at least one *research-based course:

HLTD02H3 Health Research Seminar (*research-based course)

HLTD05H3 Directed Research on Health Services and Institutions (*research-based course)

HLTD71Y3 Directed Research in Health in ~~Psychology~~ and Society (*research-based course)

~~PSYC08H3 Advanced Data Analysis in Psychology~~

HLTD80H3 Critical Health Education

HLTD81H3 Health Professions Education

HLTD82H3 Solving Black Health Disparities: Education and Promotion

HLTD96Y3 Directed Research in Paramedicine (*research-based course)

7.5 Credits of Paramedicine Courses

*PMDB22H3 Pre-Hospital Care 1: Theory and Lab

*PMDB25H3 Therapeutic Approaches to Behaviour in Crisis

- *PMDB30H3 Alterations of Human Body Function I
- *PMDB32Y3 Pre-Hospital Care 2: Theory, Lab and Clinical
- *PMDB33H3 Anatomy
- *PMDB36H3 Pharmacology for Allied Health Pre-requisite
- *PMDB41H3 Professional Issues, Research and Leadership
- *PMDC40H3 Alterations in Human Body Function II
- *PMDC42Y3 Pre-Hospital Care 3: Theory, Lab and Field
- *PMDC43H3 Medical Directed Therapeutics and Paramedic Responsibilities
- *PMDC54Y3 Pre-Hospital Care 4: Theory, Lab and Field
- *PMDC56H3 Primary Care Practice Integration and Decision Making

Recommended Course Sequence

*Please note: We recommend that, where possible, students complete UTSC courses during Summer terms to avoid taking courses at both Centennial and UTSC during the Fall/Winter. Please consult the Program Coordinator for help with navigating your pathway through this program.

First Year

5.0 credits as follows:

BIOA11H3 Introduction to the Biology of Humans
HLTA02H3 Exploring Health and Society: Theories, Perspectives, and Patterns
HLTA03H3 Navigating Health and Society: Research, Practice, and Policy
HLTA20H3 Physiology Through the Life Course: From Birth Through Death
HLTB80H3 Paramedicine as a Community-Based Health and Social Service
PSYA01H3 Introduction to Biological and Cognitive Psychology
PSYA02H3 Introduction to Clinical, Developmental, Personality and Social Psychology
STAB23H3 Introduction to Statistics for the Social Sciences
1.0 additional elective credits

Second Year

5.0 credits as follows:

*PMDB22H3 Pre-Hospital Care 1: Theory and Lab
*PMDB25H3 Therapeutic Approaches to Behaviour in Crisis
*PMDB33H3 Anatomy
*PMDB41H3 Professional Issues, Research and Leadership
*PMDB30H3 Alterations of Human Body Function I
*PMDB32Y3 Pre-Hospital Care 2: Theory, Lab and Clinical
*PMDB36H3 Pharmacology for Allied Health Pre-requisite
HLTB15H3 Health Research Methodology
HLTB40H3 Health Policy and Health Systems

Third Year

5.0 credits as follows:

*PMDC40H3 Alterations in Human Body Function II
*PMDC42Y3 Pre-Hospital Care 3: Theory, Lab and Field
*PMDC43H3 Medical Directed Therapeutics and Paramedic Responsibilities
*PMDC54Y3 Pre-Hospital Care 4: Theory, Lab and Field
*PMDC56H3 Primary Care Practice Integration and Decision-Making
HLTB16H3 Public Health
HLTB41H3 Social Determinants of Health
0.5 elective credit

Fourth Year

5.0 credits as follows:

HLTB27H3 Applied Statistics for Public Health
HLTC81H3 Health Professions and Practice
PSYB32H3 Introduction to Clinical Psychology

1.0 credit from the following:

HLTC19H3 Chronic Diseases
HLTC22H3 Health, Aging, and the Life Cycle
HLTC27H3 Community Health and Epidemiology
HLTC42H3 Emerging Health Issues and Policy Needs

1.0 credit from the following that includes at least one *research-based course:

HLTD02H3 Health Research Seminar (*research-based course)
HLTD05H3 Directed Research on Health Services and Institutions (*research-based course)
HLTD71Y3 Directed Research in Health and Society (*research-based course)
HLTD80H3 Critical Health Education
HLTD81H3 Health Professions Education
HLTD82H3 Solving Black Health Disparities: Education and Promotion
HLTD96Y3 Directed Research in Paramedicine (*research-based course)

1.5 additional elective credits

*Students are encouraged to consider the routes and threads available through the Department (e.g., Aging, Development and the Lifespan; Body Systems; Contemporary Issues in Health;

Disability, Ableism, and Health Humanities; and more). See <https://utsc.calendar.utoronto.ca/section/health-studies>.

*A grade of 60% is required in ~~these~~ **PMD** courses both to pass the course and to maintain standing in the program. All PMD courses are taught at Centennial College. Note, **that** some PMD courses require that 60% **or a "pass"** be achieved in all components of the course (i.e., lecture component, practical component, and clinical-placement component).

Note: ~~In order to~~ **T**o remain in the program, students must ~~typically~~ maintain a cumulative GPA of at least 2.0. Students whose cumulative GPA falls below 2.0 should consult the program supervisor to discuss their options. Please also note, space in some Centennial College courses is limited. Students who must repeat one of these courses and whose cumulative GPA has fallen below 2.0 will be allowed to register in these courses only if space permits.

~~Suggested Course Sequence~~

~~Year 1: Fall Semester*~~

- ~~1. BIOA01H3 Life on Earth: Unifying Principles~~
- ~~2. CHMA10H3 Introductory Chemistry I: Structure and Bonding~~
- ~~3. PSYA01H3 Introduction to Biological and Cognitive Psychology~~

~~Year 1: Winter Semester*~~

- ~~1. BIOA02H3 Life on Earth: Form, Function and Interactions~~
- ~~2. CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms~~
- ~~3. PSYA02H3 Introduction to Clinical, Developmental, Personality and Social Psychology~~

~~*In Year 1~~

~~Prospective students must also complete 0.5 credit with a recognized Diploma from Centennial College or other publicly funded and approved College in statistics [STAB22H3 Statistics I or PSYB07H3 Data Analysis in Psychology].~~

~~Year 2: Fall Semester~~

- ~~1. BIOB10H3 Cell Biology~~
- ~~2. PMDB33H3 Anatomy~~
- ~~3. PMDB22H3 Pre-Hospital Care 1: Theory and Lab~~
- ~~4. PMDB25H3 Therapeutic Approaches to Behaviour in Crisis~~
- ~~5. PMDB41H3 Professional Issues, Research and Leadership~~

~~Year 2: Winter Semester~~

Major Modification Proposal: Significant Modifications to Existing Undergraduate and Graduate Programs

- ~~1. BIOB11H3 Molecular Aspects of Genetic Processes~~
- ~~2. PMDB30H3 Alterations of Human Body Function I~~
- ~~3. PMDB32Y3 Pre-Hospital Care 2: Theory, Lab and Clinical~~
- ~~4. PMDB36H3 Pharmacology~~Ontario can be considered ~~for Allied Health Pre-requisite~~

~~Year 3: Fall Semester~~

- ~~1. BIOB34H3 Animal Physiology~~
- ~~2. PMDC40H3 Alterations in Human Body Function II~~
- ~~3. PMDC42Y3 Pre-Hospital Care 3: Theory, Lab and Field~~
- ~~4. PMDC43H3 Medical Directed Therapeutics and Paramedic Responsibilities~~

~~Year 3: Winter Semester~~

- ~~1. BIOC17H3 Microbiology~~
- ~~2. BIOC34H3 Human Physiology II~~
- ~~3. PMDC54Y3 Pre-Hospital Care 4: Theory, Lab and Field~~
- ~~4. PMDC56H3 Primary Care Practice Integration and Decision Making~~

~~Year 4: Fall Semester~~

- ~~1. BIOC21H3 Vertebrate Histology: Cells and Tissues or BIOC32H3 Human Physiology I~~
- ~~2. PSYB20H3 Introduction to Developmental Psychology~~
- ~~3. PSYB32H3 Abnormal Psychology~~
- ~~4. [BIOD33H3 Comparative Animal Physiology or BIOD65H3 Pathologies of the Nervous System or BIOD26H3 Fungal Biology and Pathogenesis or BIOD96Y3 Directed Research in Paramedicine*]~~

~~Year 4: Winter Semester~~

- ~~1. PSYC08H3 Advanced Data Analysis in Psychology~~
- ~~2. BIOD17H3 Seminars in Cellular Microbiology or BIOD43H3 Animal Movement and Exercise or BIOD29H3 Pathobiology of Human Disease~~
- ~~3. 0.5 enrollment in this Specialist program. Course credit will be considered for PMD credits of elective courses~~

~~*Students may take any 2 of the D-level courses listed above to meet program requirements. The sequence here merely reflects the current scheduling of courses in the various sessions.~~

4 Academic Rationale and Program Objectives

4.1 Program Objectives

State the program's objectives.

The program objectives are being revised to reflect the program's transition from a biomedical focus within the Department of Biological Sciences to a broader, interdisciplinary healthcare approach under the Department of Health and Society. This shift moves beyond a biomedical framework to incorporate a comprehensive understanding of healthcare systems, public health, social determinants of health and other factors with enacting health care in society. This better prepares students for the complexities of contemporary healthcare delivery, leadership, and advocacy in diverse healthcare contexts, particularly where paramedicine can play a role, while leveraging evidence. Our revised objectives are as follows:

1. To prepare graduates for contemporary paramedicine practice within integrated healthcare systems by situating clinical training within a broader understanding of health systems, public health, and community-based models of care in Canada.
2. To position paramedicine within the interdisciplinary field of Health and Society by fostering an integrated understanding of biomedical science, social determinants of health, health equity, and chronic disease across diverse populations and care settings.
3. To cultivate evidence-informed practitioners and future leaders in healthcare by embedding research literacy, applied statistical reasoning, and critical inquiry into the study and practice of paramedicine.
4. To advance equitable, community-responsive healthcare delivery by preparing graduates to contribute to health advocacy, systems improvement, public health interventions, and collaborative, patient-centred care that addresses disparities and evolving population health needs.

These objectives are also included in Appendix 2, program outcomes are included in Appendix 3, and the existing program objectives (Department of Biological Sciences) are listed in Appendix 4.

Please note, as a joint program, the Centennial College portion ensures compliance with the Ontario Ministry of Health Program Standards¹, which make up another set of program outcomes underneath the overall program objectives and outcomes we have listed. The Ministry of Health Program Outcomes are listed in Appendix 5.

¹ <https://www.ontario.ca/page/college-program-standard-paramedic>

4.2 Academic Rationale

In a **single** response, please describe the academic rationale for the proposed changes, referring to the calendar copy above, and considering the changes relative to the criteria below.

Discuss the consistency of the program's [objectives](#) with the institution's [mission](#) and U of T's/the division's/unit's [academic plans](#), [priorities](#) and commitments, including consistency with any implementation plans developed following a previous review.

Appropriateness of degree or diploma nomenclature given the program's objectives

Evidence that the following have been substantially considered in the context of developing the changes to the program and its associated resources:

- a. [Universal design principles](#) and/or the potential need to provide mental or physical disability-related accommodations, reflecting the University's [Statement of Commitment Regarding Persons with Disabilities](#).
- b. Support for student well-being and sense of community in the learning and teaching environment, reflecting the work of the [Expert Panel on Undergraduate Student Educational Experience](#) and the commitment to establishing a Culture of Caring and Excellence as recommended by the Presidential and [Provostial Task Force on Student Mental Health](#).
- c. Opportunities for removing barriers to access and increasing retention rates for Indigenous students; for integrating Indigenous content into the curriculum in consultation with Indigenous curriculum developers; and for addressing any discipline-specific calls to action, reflecting the commitments made in [Answering the Call: Wecheehetowin: Final Report of the Steering Committee for the University of Toronto Response to the Truth and Reconciliation Commission of Canada](#).
- d. Opportunities for removing barriers to access and increasing retention rates for Black students; for promoting intersectional Black flourishing, fostering inclusive excellence and enabling mutuality in teaching and learning, reflecting the commitments made in the [Scarborough Charter](#) and consistent with the recommendations of the [Anti-Black Racism Task Force Final Report](#).
- e. Opportunities for fostering an equitable, diverse, and inclusive teaching and learning environment, reflecting the values articulated in existing institutional documents such as the [Statement on Equity, Diversity, and Excellence](#), the [Antisemitism Working Group Final Report](#), the aforementioned reports, and future institutional reports related to equity, diversity and inclusion.

If appropriate, please discuss unique curriculum or program innovations, creative components, significant high impact practices related to the proposed change. Provide a statement on the way in which the proposed major modification will improve the student experience (required).

Overview

The Specialist (Joint) in Paramedicine began in 2002 and has been rooted in the biomedical model. When the curriculum was developed with this lens, it appropriately focused on cellular and biological mechanisms of health and pathology. In the Department of Biological Sciences, the curriculum included courses such as cell biology (BIOB10H3), molecular aspects of genetic processes (BIOB11H3), animal physiology (BIOB34H3), microbiology (BIOC17H3), vertebrate histology (BIOC21H3), as well as human physiology (BIOC32H3, BIOC34H3). This focus was appropriate in a context where paramedicine was predominantly viewed from a biomedical lens.

While paramedicine continues to require attention to related sciences (e.g., BIOA11H3 – Introduction to the Biology of Humans, HLTA20H3 – Physiology Through the Life Course: From Birth Through Death), the changing healthcare landscape has also meant the need to consider paramedicine through a health and society lens. The limitations of concentrating mainly on biological factors has become increasingly apparent—particularly in its neglect of social, psychological, and environmental determinants of health. Modern healthcare acknowledges that patient outcomes are shaped by a complex interplay of biological processes and broader social determinants, including socioeconomic status, community support, healthcare accessibility, and public health policies.

The proposed curriculum modification reflects this transformation and we believe aligns with UTSC's vision to support adaptable global leaders, while disrupting the status quo. Now in the Department of Health and Society, the program integrates courses that emphasize public health (HLTB16H3), health policy (HLTB40H3), social determinants of health (HLTB41H3), interdisciplinary collaboration (HLTC81H3), chronic diseases (HLTC19H3), aging and the life cycle (HLTC22H3), solving black disparities (HLTD82H3) and paramedicine as a community-based health and social service (HLTB80H3). These additions mark a more holistic framework that situates paramedicine and health within a broader societal and professional context. By prioritizing community-based care, health systems, and the social influences on health, the program aims to equip paramedics with the knowledge and skills necessary to address the multifaceted challenges of contemporary healthcare. Further, the inclusion of more research-related courses (e.g., Applied Statistics for Public Health (HLTB27H3), introduction to Health Research Methodology (HLTB15H3), Directed Research in Health and Society (HLTD71Y3), Directed Research on Health Services and Institutions (HLTD05H3) and Directed Research in Paramedicine (HLTD96Y3)) aligns with the University's mission to being an internationally significant research university.

The relocation of the paramedicine program to the Department of Health and Society was a strategic and necessary step. We will continue to offer a 20-credit Bachelor of Science degree but with a new focus on the healthcare system without compromising on ensuring that candidates are ready for clinical roles. This department is well-positioned to augment the curriculum by leveraging its interdisciplinary academic environment, blending insights from

biological sciences with those from public health, health policy, and social sciences. This move ensures the program's relevance and prepares graduates not only for emergency response but also for roles in health promotion, research, disease prevention, and community health. Such a holistic approach is essential for developing well-rounded healthcare professionals capable of understanding and navigating the complexities of today's healthcare systems. Joint with Centennial College, the program continues to include a combination of theoretical coursework and hands-on practical training that aims to provide students with an understanding of the underlying principles that guide effective medical intervention in emergency and non-emergency situations within a broader healthcare context. To complement theoretical learning, the program continues to incorporate extensive clinical and fieldwork-integrated learning, enabling students to gain practical experience in real-world conditions. This includes rotations in hospital emergency rooms, paramedic services, and other medical settings where students can enhance their learning and apply what they have learned in the classroom to actual patient care situations. These experiential settings are already in place. In addition to gaining practical experience, these placements serve to familiarize students with the workings of paramedic services and its position in healthcare, and helps them develop the skills needed to function as part of paramedic and interdisciplinary teams.

Responding to Recommendations of External Review and Evolving Context of Paramedicine Education and Practice (External)

In response to the external reviewer's recommendations and the evolving context of paramedicine education and practice in Canada, a major program modification is being proposed to the Specialist in Paramedicine for the following academic reasons:

1. **To improve holistic education:** The Department of Health and Society is well-positioned to offer a curriculum that aligns with the evolving direction of the profession, including a focus on interdisciplinary healthcare. Given the shift in the field, it is crucial to provide students with a more comprehensive understanding of healthcare, extending beyond a strictly biomedical or biological focus. This involves attending to:
 - a. **Complexities in Healthcare:** Modern healthcare- especially emergency care- requires consideration beyond the biomedical model. For instance, care strategies for patients with mental health issues, how health professions integrate, the role of ethics, and health policy also play a significant role. Our proposal equips students with an understanding of these and other healthcare issues that have previously been absent. Examples include: HLTA02H3 – Exploring Health and Society: Theories, Perspectives, and Patterns; HLTA03H3 – Navigating Health and Society: Research, Practice, and Policy; HLTB16H3 – Public Health; HLTB40H3 – Health Policy and Health Systems; HLTB80H3 – Paramedicine as a Community Based Health and Social Service; HLTC81H3 – Health Professions and Practice.
 - b. **Social Determinants:** The program's focus on Health and Society allows it to directly address the social determinants of health and public health, which are

recognized as vital to understanding and improving healthcare outcomes. Examples include: HLTB16H3 – Public Health; HLTB41H3 – Social Determinants of Health.

- c. **Health Inequities:** Our proposed program includes opportunities to explore and address systemic issues related to healthcare disparities, particularly in marginalized communities. Examples include: HLTB16H3 – Public Health; HLTB41H3 – Social Determinants of Health; HLTC19H3 – Chronic Diseases; HLTC42H3 – Emerging Health Issues and Policy Needs;; HLTD82H3 Solving Black Health Disparities: Education and Promotion; and several research opportunities.
2. **To broaden research/academic opportunities:** The paramedicine community is increasingly working to develop its research capacity and contributions to ensure the profession moves forward in evidence-informed ways. Our proposal includes a handful of research courses and new types of collaborative research opportunities for students and considers a wider range of variables affecting public, patient and health system outcomes. These capabilities are new expectations of graduates entering and contributing to the profession and/or healthcare system, and better prepare students for graduate studies, should they choose to pursue them.
3. **To promote alignment with system enhancements and employability:** As healthcare systems grow increasingly complex, graduates who understand not just the biological, clinical, or practical aspects but also the social and systemic aspects of care will find themselves more prepared for broadening roles (e.g., addressing health disparities), able to contribute more meaningfully (e.g., with new models of care), and more competitive in the job market.

Aligning to Department's Academic Plan, and UTSC/U of T's Strategic Initiatives (Internal)

Second, the proposed changes align with the Department's Academic Plan and various strategic initiatives.

1. Alignment with the Department's Academic Plan:

- a. This unit promotes an understanding of health across a spectrum of diverse but conversant disciplinary perspectives, from the clinical and biological health sciences to social science and humanistic ways of knowing. There is a focus on the need for rigorous biological knowledge to be understood in tandem with the social milieu of human health and embodiment.
- b. Offering various educational pathways that respond directly to the evolving needs of our healthcare system. Healthcare systems continue to be challenged. For example, global pandemics, aging populations, the rise of chronic diseases, accessibility and equity challenges, primary care crises, and health human resource challenges continue to create strain. Solutions require professionals

who understand the implications on individual patient care and broader health policy to contribute to health systems that are more resilient, equitable, and responsive. The diversity of courses included in the DHS calendar available through our course planning and electives, provides opportunities for learners to focus on different parts of these issues.

- c. An effort to open new avenues for research and collaboration, both within the university and with external healthcare partners. The aim is to provide a fertile ground for innovation, where interdisciplinary research can flourish, addressing pressing health issues while also advancing our understanding of health practices and policies.
2. **Scarborough Academy of Medicine and Integrated Health (SAMIH):** UTSC has a strategic initiative with SAMIH that includes paramedicine, focusing on societal impact, community engagement, and interdisciplinary practice and research. Aligning the Paramedicine program with this mandate is another example of strategic alignment.
3. **Emphasis on health sciences, professions and practice and access to the “Certificate in Pathways to Health Professions”:** In a time where the intersectionality of health disciplines is more crucial than ever, the Dean’s office introduced a “Health Sciences” stream, and the “Certificate in Pathways to Health Professions” representing a visionary and strategic augmentation of its academic offerings. This was embedded in the Department of Health and Society (DHS) due to its alignment. The focus on health sciences bridges the gap between theoretical knowledge and practical application, preparing students for the dynamic realities of healthcare professions and to understand their role in the broad healthcare system. This is vital in a professional and educational landscape where interdisciplinary understanding is key to tackling complex health challenges. The Certificate is intended to expand learner knowledge to cultivate skills like leadership, communication, equity, and critical thinking – areas that are essential in healthcare. This proposal supports the aim of creating a unique learning environment that equips learners with a comprehensive toolkit, fostering professionals who are not only skilled practitioners, but also astute change and policymakers. The Paramedicine program is the first clinical health profession program offered in the department.
4. **Alignment with the “Paramedicine Collaborative at the Department of Family and Community Medicine”:** In July 2023, the DHS partnered with the Department of Family and Community Medicine (DFCM), Temerty Faculty of Medicine at the University of Toronto to establish a Paramedicine Collaborative. This research entity focuses on research, innovation, scholarship, and education.

5 Program Design

5.1 Admission Requirements

Please describe any proposed changes to admission requirements by considering the changes tracked in the calendar copy relative to the following:

- a) Discuss the appropriateness of the program's admission requirements given the program's objectives and program-level learning outcomes.
- b) Sufficient explanation of alternative requirements, if applicable, for admission into a graduate, second-entry or undergraduate program (e.g., minimum grade point average, additional languages or portfolios, and how the program recognizes prior work or learning experience).

Current Admission Requirements

The current admission requirements for Ontario high school students are:

- High school diploma (OSSD)
- At least six (6) Grade 12 "U" or "M" courses
- Proof of [English language proficiency](#), if necessary

Admission prerequisite:

- Advanced Functions or Calculus & Vectors or Mathematics of Data Management
- Biology
- Chemistry (recommended)
- English

Approximate grade requirements: Low 80s

Please note: Paramedicine is a first-year entry program; if you have completed post-secondary studies, you are not eligible for admission. Exception: Applicants who have completed a Paramedic diploma program from an Ontario college will be considered and are welcome to apply.

New Admission Requirements

Given the change from Biological Sciences to the Department of Health and Society, and the removal of Chemistry courses from program requirements, we propose removing Chemistry as an admission recommendation and replacing the “Advanced Functions or Calculus & Vectors or Mathematics of Data Management” math requirement with any grade 12 math.

The revised admission requirements are:

- High school diploma (OSSD)
- At least six (6) Grade 12 “U” or “M” courses.
- Proof of [English language proficiency](#), if necessary
- [Learn more about applying as an Ontario high school student.](#)

Admission prerequisite:

- Grade 12 Math
- English
- Biology
- Chemistry (recommended, not required)

Approximate grade requirements: Low 80s

Please note: Paramedicine is a first-year entry program; if you have completed post-secondary studies, you are not eligible for admission. Exception: Applicants who have completed a Paramedic diploma program from an Ontario college will be considered and are welcome to apply.

5.2 Program Structure and Requirements

Addressing the prompts below in **one** response, please discuss any proposed changes to program requirements, including any changes to milestone assessments, by considering the changes relative to the following criteria:

5.3 All Programs

With reference to the change proposed, discuss the appropriateness of the program's structure and the requirements to meet its objectives and program-level learning outcomes, including the structure and requirements of any identified streams (undergraduate), fields or concentrations (graduate).

Appropriateness of the program's structure, requirements and program-level learning outcomes in meeting [the institution's applicable undergraduate or graduate Degree Level Expectations](#).

- a) Please state the mode of delivery and if it is changing, indicate the appropriateness and effectiveness of the proposed mode(s) of delivery (i.e., means or medium used in delivering a program; e.g., lecture format, distance, online, synchronous/asynchronous, problem-based, compressed part-time, flexible-time, multi-campus, inter-institutional collaboration or other non-standard forms of delivery) to facilitate students' successful completion of the program-level learning outcomes.
- b) If changing the mode of delivery of the program to online for all or a significant portion of a program that was previously delivered in-person, please discuss the following:
 - i. Maintenance of and/or changes to the program objectives and program-level learning outcomes
 - ii. Adequacy of the technological platform and tools
 - iii. Sufficiency of support services and training for teaching staff
 - iv. Sufficiency and type of support for students in the new learning environment
 - v. Access
- c) Ways in which the proposed curriculum addresses the current state of the discipline or area of study and is appropriate for the level of the program.
- d) If applicable, details on any new experiential learning that is part of the program, including confirmed and interested partners, duration of experiential learning component in a program, and anticipated number of placements.

Proposed Changes

This proposal is making changes to program requirements. Proposed changes are listed below:

- New program objectives (see section 4.1) and outcomes (see Appendix 2 for program objectives and Appendix 3 for program learning outcomes).

In considering the proposed change from a biomedical focus within the Department of Biological Sciences to a broader, interdisciplinary approach under the Department of Health and Society, we have evaluated the appropriateness of the program's structure in relation to its revised objectives and program-level learning outcomes. For instance, we have included:

1. Interdisciplinary Curriculum:
 - a. The proposed structure reflects a diverse and comprehensive curriculum, drawing from biological sciences, psychology, public health, paramedicine, and healthcare systems. This interdisciplinary approach supports the revised program objectives, which aim to prepare students for contemporary healthcare challenges, particularly in leadership and advocacy roles.
 - b. The inclusion of both biomedical and social health sciences courses ensures that students gain a holistic understanding of healthcare, integrating physiological knowledge with a deep understanding of social determinants, public health policy, and chronic disease management. This combination aligns with both the broad objectives and the specific program learning outcomes (PLOs).
2. Application of Knowledge in Real-World Contexts:
 - a. The inclusion of applied and experiential courses, such as clinical decision-making, paramedicine theory and lab courses, and community health services, is appropriate for ensuring that students not only gain theoretical knowledge but also develop the skills to apply this knowledge in practical settings. This supports the PLOs that focus on analyzing healthcare systems, designing interventions, and collaborating in interdisciplinary teams.
 - b. These courses also emphasize leadership and crisis management in healthcare delivery, which aligns with the objective of preparing students for professional roles in paramedicine and healthcare services.
3. Emphasis on Research and Analytical Skills:
 - a. The program's focus on research courses, including health research methodology and directed research opportunities, ensures that students can design, conduct, and evaluate research projects in both community-based and institutional settings. This structure is crucial for achieving the outcome related to research and analytical competency, enabling students to contribute to evidence-based healthcare practices.
4. Ethics and Professional Responsibility:
 - a. Courses covering professional issues, research, and leadership are integral to addressing the program's objective of fostering ethical and legal professionalism in healthcare contexts. These courses allow students to engage with professional standards and apply ethical principles in decision-making, aligning with the program learning outcome that emphasizes adherence to ethical standards across various healthcare environments.

- We have mapped the objectives and outcomes to the corresponding undergraduate degree-level expectations in Appendix 6.
- There are no changes to the mode of delivery.
- See section 4.2 for the ways in which the proposed curriculum addresses the current state of the discipline.
- Year 4 courses at UTSC (HLTD71Y3 – Directed Research in Health and Society, or HLTD05H3 – Directed Research on Health Services and Institutions, or HLTD02H3 – Health Research Seminar, or HLTD96Y3 – Directed Research in Paramedicine), are intended to support research capacity growth while offering flexibility for demanding placement obligations at Centennial.
- No changes have been made to the Centennial PMD courses or sequence of courses.
- All UTSC Biology (BIO) courses except for BIOA11H3 have been replaced with HLT courses.
- All existing and required year 1 Psychology (PSY) courses (PSYA01H3, PSYA02H3) have been retained. PSYB32H3 – Introduction to Clinical Psychology has been moved to year 2 (from year 4). PSYB20H3 – Introduction to Developmental Psychology, has been replaced with an HLT credit.
- Two recently approved course are being proposed as mandatory for the Paramedicine Specialist: (1) HLTB27H3 – Applied Statistics for Public Health (Year 1 Winter) , and (2) HLTB80H3 – Paramedicine as a Community Based Health and Social Service (Year 2 Fall) is a new course developed for this Specialist program, which was approved through governance during the 2024-25 academic year.

See Appendix 1 for a copy and side-by-side comparison of the existing Biological Sciences program courses and the proposed Department of Health and Society program courses and sequence.

There are no changes to credit requirements, counts, or sequence for the Centennial portion (7.5 credits) or to degree and diploma conferred. The number of credits required at UTSC remains 12.5 credits, inclusive of all remaining program and breadth requirements. The number of UTSC-based program-required courses changes from 9.0 to 9.5 (i.e. 17.0 credits total for Specialist completion including 9.5 UTSC-based courses, 7.5 Centennial-based courses and 3.0 credits remaining for overall degree completion (degree electives and the remaining Arts, Language, and Literature breadth requirement, which is the only degree requirement not already fulfilled by courses required for the program.)

Notes on Progression to Centennial College (Year 2)

The existing Paramedicine Specialist program (in Biological Sciences) includes minimum requirements to progress to the Centennial portion of the joint program. These include all year 1

core courses and a minimum GPA of 2.0. In the new set of requirements, progression requirements will include:

1. Must have completed all year 1 core courses as outlined in the course sequence (see Appendix 1).
2. Must have a minimum CGPA of 2.0 at the end of year 1. Students who are below 2.0 at the end of Year 1 will be provided with academic advising and notified that they have an additional year to raise their CGPA. At the end of the 1st term of year 2, students below 2.0 will again (or for the first time), be provided with academic advising and notified that they have one additional term to achieve a minimum CGPA of 2.0.

Rationale: Centennial College expects completion of these foundational courses prior to entering the paramedicine portion of the program. This promotes student readiness. Also, demands on students are high in the Centennial portion which students have difficulty anticipating. As such, ensuring year 1 requirements are not extended into years 3 and 4, promotes student preparedness and success. The requirement for a CGPA of 2.0 is intended to ensure students have attained a foundational level of knowledge, have the academic acumen to proceed and to identify who may need additional supports to achieve that expectation. This is not a new requirement, but one we are maintaining in the transition from the Department of Biological Sciences to the Department of Health and Society.

Additional Modifications

The following additional modifications are being proposed:

- For direct entry, a modification is being proposed to the admission requirements. We proposed that Calculus and Advanced Functions be replaced with a more generic senior-level Math credit requirement and that Chemistry be removed as a recommended course.
- Dr. Walter Tavares has joined the Department of Health and Society to support the transition of the Paramedicine program from the Department of Biological Sciences. No other faculty changes are included.

We also note:

- No changes to the Centennial course structure and/or placement (experiential learning) requirements or processes.
- No changes to mode of delivery, language, location or institution are being proposed.

The previous program learning outcomes (PLOs) were structured to ensure a holistic and in-depth understanding of biological sciences (see Appendix 4), and to meet the vocational learning outcomes (VLOs) prescribed by the [Ontario Ministry of Health Paramedicine Program](#)

Standards (see Appendix 5). For instance, to meet depth and breadth requirements for the Biological Sciences component, the program included understanding the molecular, cellular, and systemic levels of organization. Paramedic VLOs include 11 statements specific to paramedic practice in Ontario that must be achieved for access to the provincial certification exam. For example, VLO-1 states the ability to “communicate and interact effectively and appropriately with patients and others”. VLO-5 states “integrate and perform delegated controlled medical acts in a simulated, clinical and field setting”.

This proposed program modification replaces the PLOs by Biological Sciences with those specific to and aligned with the Department of Health and Society and the direction of paramedicine broadly (see Appendix 2). Specifically, the new PLOs emphasize healthcare systems, health, integrated health knowledge, research and analytical competency for health systems, health professions and interdisciplinary collaboration, ethical and professional responsibility, communication, health advocacy and leadership. These PLOs align with the DHS outcomes specified across two major program areas, specifically, Health Policy and Population Health. For example, “Recognize the interplay of the multiple, interacting determinants of health and systems of oppression that contribute to inequitable health outcomes throughout the life course, at both population and individual levels.” Our proposed outcomes also align with the “Principles to Guide the Future of Paramedicine in Canada” (Tavares et al., 2021) including “patients and their communities first”, “healthcare along a health and social continuum” and “integrated health care”.

- Appendix 4 = Program Learning Outcomes for the HBSc Paramedicine Specialist when in the Department of Biological Sciences.
- Appendix 5 = Paramedicine Diploma program standards common to both the Department of Biological Sciences and Health and Society
- Appendix 3 = Program Learning Outcomes for HBSc Paramedicine Specialist when in the Department of Health and Society.

Our educational contexts represent a diverse student population. This includes mature students, students with English as a second language, different family histories, nationalities, and ethnicities, children of immigrant parents, others born outside of Canada with varying family and socioeconomic status, supports and more. Leveraging experiences, dialogues and the use of assessment or other teaching choices means different things to different learners, shifting engagement, as well as how opportunities are received or used. Universal design for learning is a broad concept, taken as a principle, that aims to make education accessible, meaningful and challenging while eliminating barriers. It cautions against standardization, not necessarily in content, but in the process of teaching and learning. This helps to make issues of engagement such as minimizing threats, representation to support transfer and generalization, action and expression through guiding or supporting educational planning, as priorities in planning and enacting teaching and learning.

The program modifications have taken into consideration the following core principles of universal design at UTSC/U of T:

1. **Multiple means of engagement:** DHS courses have been structured to allow students to experience different forms of engagement that we intended as a means of promoting motivation. For example, we have included courses that align with traditional lecture-based formats (e.g., HLTB40H3 – Health Policy and Health Systems), experiential learning (e.g., HLTD96Y3 – Directed Research in Paramedicine, PMDC54Y3 – Pre-hospital Care 4: Theory, Lab and Field), applied (e.g., PMDB22 – Prehospital Care 1 – Theory and Lab) and theoretical opportunities (HLTA02H3 – Exploring Health and Society: Theories, Perspectives, and Patterns), community-engaged learning (HLTD02H3 – Health Research Seminar), and supervision-based (HLTD71Y3 – Directed Research in Health and Society). Students have choice and autonomy in some of the courses (based on the elective structure), promoting perceived and actual relevance and value. There are no changes introduced that would create new threats to this principle.
2. **Multiple means of representation:** the program is designed to support varied learning preferences and needs. For instance, we have included multiple options for comprehension, including activating prior knowledge through pre-course assessments and integrating content that highlights key patterns, relationships, and big ideas in health and societal contexts. For example, in HLTD02H3 – Health Research Seminar, we have structured the course to allow learners the opportunity to identify their own ideas as they relate to advancing health systems and to connect that to personal experience or interests. Courses are designed to promote information processing through interactive simulations and case studies to maximize transfer and generalization of knowledge. For example, PMDB22H3, B32Y3, C42Y3 and C54Y3 (Pre-hospital Care 1-4) all include hands-on simulation-based activities, while several health policies (e.g., HLTB40H3) and research courses (e.g., HLTD96Y3) provide other forms of hands-on experiences (e.g., developing policy briefs, developing research proposals). The program includes existing opportunities to access supports (e.g., support for diverse linguistic and mathematical abilities). There are no changes introduced that would create new threats to this principle.
3. **Multiple means of action and expression:** the program includes opportunities for students to develop executive functions, such as goal-setting, planning, and progress monitoring, through workshops offered through the Department, strategic planning resources, and digital tracking tools. It emphasizes diverse modes of expression and communication, integrating multiple media and tools for construction alongside graduated support to build fluency.
4. **Physical Requirements:** the program continues to require physical abilities that have created accessibility challenges (e.g., mandatory lifting tests) due to the nature of the work and placements. Some assistive technologies are included, but those with some physical disabilities would be unable to complete the program. This is a continuing mandatory requirement, not a new one.

We have attended to student well-being and resiliency in the following ways:

1. **Holistic Education Approach Reduces Role Dissonance:** Role dissonance has resulted in tensions for those entering the profession. By integrating a curriculum that goes beyond the traditional biomedical and emergency focus to include interdisciplinary and broader healthcare considerations, the program ensures a more comprehensive understanding of health and social care and healthcare systems. This broadened perspective helps students develop a deeper and more aligned understanding of the various factors influencing health and healthcare delivery, fostering adaptability and resilience in complex healthcare environments.
2. **Attending to Student Workloads and Schedules:** Terms vary in the degree of change that students experience (e.g., from theoretical to applied), student workloads, independent practice expectations, and placement obligations. Our course sequencing, anticipated workload, elective structure and variability in modalities is structured to promote balance in the student's lives.
3. **Expanded Research and Academic Opportunities:** By incorporating additional research content and fostering collaborative research, the program encourages critical thinking and problem-solving skills, as well as enhanced networking opportunities. This exposure to research enhances students' ability to contribute to and understand the evolving landscape of healthcare, including priority areas of research in paramedic well-being.
4. **Employability and System Alignment:** Training students in both the clinical/practical and social/systemic aspects of healthcare increases their employability and relevance in the modern healthcare sector. Understanding these broader aspects ensures that graduates are well-prepared to face the challenges of an evolving healthcare system.
5. **Flexible and Supportive Academic Policies:** Our modification continues with opportunities for flexibility including offering options for course withdrawals or incompletes, unique student pathways, and having supportive academic advisors and program supervisors at both institutions. This modification recognizes learners face various challenges (especially in a program that exposes learners to stressful environments, shift work and potentially traumatizing events) and need support to manage their academic responsibilities.
6. **Mental Health Supports:** we continue to include mental health resources and supports, a peer-support and mentorship program organized by Centennial, health and wellness services at UTSC, active learning and engagement opportunities, physical spaces for relaxation and socialization, open lines of communication, prioritization of work-life balance, and mindfulness and resiliency training (provided by Centennial).

We have included the following strategies to promote a sense of community:

1. **Maintain and Augment Orientation and Welcome Events:** Organizing orientation sessions and welcome events at the beginning of the program will help new students feel included and connected. These events provide opportunities for students to meet peers, faculty, and staff, setting the tone for a communal experience.
2. **Augment Academic Mentorship Programs:** Mentorship programs where senior students mentor new learners will facilitate a sense of belonging and provide new students with guidance and support from those who have experienced similar challenges. These mentorship opportunities follow orientation and welcome events.
3. **Leveraging Existing and Supporting the Introduction of New Student-led Clubs and Organizations:** Several student clubs and organizations related to the program's field (e.g., campus emergency response teams, peer support programs) will allow students to pursue common interests, build networks, and engage in collaborative projects.
4. **Augment Community Service and Volunteer Opportunities:** Organizing community service projects or volunteer opportunities allows students to work together towards a common goal, strengthening communal ties and offering a sense of purpose. Supporting the Ronald MacDonald House, or United Way ClimbUP are examples.
5. **Introduce New Interdisciplinary Collaboration:** Facilitating opportunities for students to collaborate with peers from other disciplines can broaden their network and understanding, fostering a diverse community. The annual mock disaster (a large, simulated disaster response involving several health and public safety personnel) is an example.
6. **Leverage Existing Experiential Learning Peer Support Systems:** The program includes a peer support program to support placement experiences. This provides emotional and academic support, making students feel more connected and supported.
7. **Wellness and Stress-Relief Activities:** Organizing wellness and stress-relief activities, like yoga sessions or mindfulness workshops, can provide shared spaces for relaxation and emotional support. The existing "Reach for Resiliency" program is an example of this approach, currently offered on the Centennial campus specifically for this program.

See section 3.1 for a calendar copy of the existing program, section 3.2 for the proposed program, and section 3.3 for the proposed changes to the existing program presented in the track changes format.

6 Impact of the Change

Assessment of the impact the proposed modification will have on the program's students and/or other units or divisions.

Impact on Existing Students

Students currently enrolled in the existing Specialist program in Paramedicine will continue through program completion based on completion requirements published the year they joined UTSC. All new students will be made aware of changes in course sequencing and the new set of completion requirements featuring more HLT courses in orientations and in written communication.

In short, students will follow/continue to follow the requirements outlined in the Academic Calendar published the year that they joined the program. We will support students who started in a calendar year prior to the change if they desire to switch pathways in part or full on a case-by-case basis, by either switching their requirements to a later calendar year (as is standard practice on request at UTSC), or by making specific course substitutions in Degree Explorer to allow students to pursue interests in HLT courses.

The decision to relocate the Paramedicine Program from the Department of Biological Sciences to the Department of Health and Society will have several positive consequences that touch on pedagogy, research, administration, and even the institution's external relationships. The administrative relocation has already yielded positive outcomes: a dedicated program coordinator for Paramedicine was hired through the Department of Health & Society in 2024 which has led to increased student support, engagement, and satisfaction. The proposed switch of required coursework from primarily Biology courses to Health & Society courses will complete the program's relocation. Below are some areas where the potential impact of this change could be significant:

1. **Interdisciplinary Approach:** a broader, more holistic approach to paramedicine education, including topics like social determinants of health, healthcare policy, and public health, in addition to biological and clinical aspects.
2. **Content:** a reduction in content that is purely biological or technical in nature to bring greater balance and relevance to the curriculum. This is an important opportunity to focus on and integrate other equally important aspects of healthcare.
3. **Research Synergies:** Research foci may shift from primarily biological or clinical studies to research that is more interdisciplinary, possibly influencing the kinds of grants and projects that faculty and students engage in.
4. **Career Preparation:** Students will find themselves better prepared for roles that require an understanding of healthcare systems, policy, and social issues.

5. **Course Selection:** Students will have a broader range of courses that align with their profession, making for a more versatile educational experience.
6. **Industry Partnerships:** Collaborations with hospitals, emergency services, and other healthcare providers may change in nature, potentially broadening to include social service organizations or public policy bodies.
7. **Public Perception:** The shift could also affect how the program is viewed by prospective students and employers, enhancing its reputation due to its innovative, holistic approach.

The proposed program changes were presented to all existing students for input and discussion in the Fall of 2023. Overall, students expressed support for the change and recognized the improved alignment. Below is a summary of the issues raised and our responses:

- a. Ability to continue in biological sciences: existing students raised concerns about the implications of the change for them. As indicated above we confirmed that existing students would not be impacted.
- b. Interest in the biological stream: some expressed interest in continuing with a biological stream. We indicated that students could continue to take biology courses as part of their elective offerings.

Based on consultations undertaken with student representatives in the Fall of 2023, there is interest/support in us reconsidering the current 1+2+1 structure in addition to the proposed course changes as described in this proposal. This is something we are actively exploring while we continue to monitor the evolving nature of paramedicine education in Ontario

7 Resources

7.1 Resources: All programs

Given the program's class sizes and cohorts as well as its program-level learning outcomes, please discuss:

- Participation of a sufficient number and quality of core faculty who are competent to teach and/or supervise in and achieve the goals of the program and foster the appropriate academic environment.

There are no changes to enrolment targets (35 per year). Students enrolled in the Paramedicine program will be required to take a collection of HLT courses. This has been reviewed carefully by the DHS Chair and Program Coordinator, and there are no concerns regarding space or the need for additional faculty. Associate Professor Dr. Walter Tavares has recently been hired to support this program, and was appointed Associate Chair, Undergraduate in DHS beginning Fall 2025. Dr. Tavares has experience in paramedicine, is actively involved in the paramedicine community, understands the diploma portion of the program very well and plays a critical role in supporting this program. A new Program Coordinator was hired in 2024 to support the integration of this program into the DHS as well as with student advising.

If applicable, discuss the role and approximate percentage of adjunct and sessional faculty/limited term appointments used in the delivery of the program and the associated plans to ensure the sustainability of the program and quality of the student experience.

The program modification includes 1 additional paramedicine-specific course. This can be taught by existing faculty. There are no new demands for adjunct and sessional faculty as a result of this program modification. As a result, the program is sustainable given the integration into and with existing Department of Health and Society resources.

Broadly, there are two experiential categories. The first includes hospital and field/paramedic service experiential learning opportunities included in years 2 and 3. The supervision expectations are managed by Centennial College, and this program modification does not include any new demands on Centennial or UTSC. The second is the inclusion of research courses, some of which require faculty supervision. Existing DHS faculty can accommodate some of the supervision requirements. However, additional supervisors (not faculty) are likely to be required. We have some experience with this in BIOD96Y3 – Directed Research in Paramedicine (now HLTD96Y3), which tells us the demands are not excessive, and students have been sufficiently supported. Anticipating some increase in supervision, DHS has collaborated with the Paramedicine Collaborative at the Department of Family and Community Medicine to ensure additional student support is available.

Adequacy of the administrative unit's utilization of existing human, physical and financial resources, including implications for the impact on other existing programs at the University.

The program modification does not include any new demands on the unit's existing human, physical, or financial resources. Nor does the program modification impact any other department or resources.

Evidence that there are adequate resources to sustain the quality of scholarship and research activities produced by students, including library support, information technology support, and laboratory access.

This program modification does neither introduce the need for any new resources, nor does it take any away. All existing services are expected to continue and be a seamless transition for the services provided and students.

If necessary, additional institutional or divisional resource commitments to support the program in step with its ongoing implementation.

The major program modification will neither affect any existing agreements with other institutions, nor require the creation of any new agreements.

8 Consultation

Describe consultation with internal (e.g., faculty, students, cognate units, etc., as appropriate) and external stakeholders (e.g., alumni, community or professional organizations, etc., as appropriate).

Consultations

Transitioning the Specialist in Paramedicine program to the Department of Health and Society and including HLT program requirements means increased enrollment in existing HLT courses and the need to create one new course. The following consultations have been made:

1. **UTSC Departmental Review:** program modifications were proposed to and reviewed with the Department Faculty, Chair and Program Coordinator. Program structure, course content and sequencing (including pre-requisites) were considered, including capacity and impact on other programs. These discussions most recently occurred at the October 2025 Departmental Curriculum Committee meeting, with final minor adjustments approved at DCC meeting on Tuesday, January 20, 2026.
2. **Centennial College Review:** given the Departmental change, change to program learning outcomes, courses and sequencing, the proposed modifications included input from colleagues at Centennial College, including the Faculty, Coordinator, Chair, Dean, and Joint Programs Leadership. The current version of this proposal was sent to Centennial College stakeholders in December 2025, and they replied with their approval (no comments or questions) on January 14, 2026.
3. **Joint Programs Steering Committee:** high-level detail of the proposed changes and status updates were shared with the Joint Programs Steering Committee for review and input, and to identify any implication for the memorandum of understanding between institutions, other programs and institutional supports and processes. The Joint Programs Steering Committee meets twice a year, in May and November of each year. This Committee was most recently updated on this proposal in November 2025.
4. **Dean's Office:** we consulted with the Dean's Office on a regular basis throughout 2024 and 2025 in the development of this proposal and in determining the scope of the proposed changes.
5. **Biological Sciences:** Dr. Terebiznik was consulted in Fall 2024 and sent an updated proposal in December 2025. He acknowledged that BIOA11H3 would see increased enrollment due to the proposed changes. No concerns were raised.

6. **Psychology:** The program modification was presented to Dr. Jon Cant, Acting Chair of the Department of Psychology in September 2024. Specifically, indicating our intention to **retain** PSYA01H3 – Introduction to Biological and Cognitive Psychology, PSYA02H3 – Introduction to Clinical, Developmental, Personality and Social Psychology, and PSYB32H3 – Introduction to Clinical Psychology, AND **remove** PSYB20H3 – Introduction to Developmental Psychology and PSYC03H3. Dr. Cant was supportive of the proposed changes and their impact on the above PSY courses. An updated proposal was sent in December 2025 and Chair Suzanne Erb replied with continued support.
7. **Computer & Mathematical Sciences:** The program modification was shared with Dr. James Bremer through the Campus Curriculum Committee on September 27, 2024. Dr. Michelle Silver and Dr. Walter Tavares presented a summary of the program modification, with no requests for revisions or concerns. An updated proposal was sent in December 2025; no questions or concerns were received in response.
8. **Department of Physical and Environmental Sciences:** The program modification was presented to Dr. George Arhonditsis, Professor and Chair of Physical and Environmental Sciences, and Dr. Shadi Dalili, Associate Chair, Undergraduate, Department of Physical and Environmental Sciences, specifically indicating our intention to remove CHMA10H3 – Introductory Chemistry 1: Structure and Bonding and CHMA11H3 – Introductory Chemistry 2: Reactions and Mechanisms from the Paramedicine Specialist. A subsequent discussion was had with Dr. Dalili, who also attended our presentation to the Campus Curriculum Committee on September 27, 2024. On September 27, 2024, Dr. Dalili acknowledged the change and had no further issues or concerns. An updated proposal was sent to current Chair Julian Lowman in December 2025; he had no concerns.
9. **Registrar/Admissions:** The program modification was discussed with the registrar's office on December 5, 2024. In attendance were Shelby Verboven, Registrar and Assistant Dean, Strategic Enrolment Management, Lindsey Taylor Office of the Registrar and Dallas Boyer, Associate Registrar and Director of Student Services. All supported the change to the admission requirements and provided other minor suggestions reflected in this program modification proposal, including compliance with degree requirements and the potential to offer prospective students with a recognized Diploma from Centennial College or other publicly funded and approved College in Ontario enrollment pathways in this Specialist program. An updated proposal was sent in December 2025; Lindsey Taylor replied with comments related to execution in Degree Explorer but had no concerns with anything proposed.
10. **Student Representatives:** As noted above, student representatives were consulted about the proposed change in structure and the course sequence in the Fall of 2023. The overall program structure was presented to all existing students for input and

discussion. Overall, students expressed support for the change and recognized the improved alignment. Below is a summary of the issues raised and our responses:

- a. Ability to continue in biological sciences: existing students raised concerns about the implications of the change for them. As indicated above we confirmed that existing students would not be impacted.
- b. Interest in the biological stream: some expressed interest in continuing with a biological stream. We indicated that students following the new course requirements could continue to take biology courses as part of their elective offerings, if they desired.

11. Campus Curriculum Committee: The program modification was presented to the UTSC Campus Curriculum Committee on September 27, 2024. In our verbal report, we emphasized the new course structure and sequence, how the Centennial portion has remained unchanged, new program learning outcomes, a shift in philosophy and content and the inclusion of one new course. We provided our rationale for these changes, a copy of the existing and proposed program structure and anticipated impact on other departments. A copy of the report is included in Appendix 8. No changes were recommended based on our verbal and to our written report.

Appendix 1: Course Sequence for Proposed Modification to Specialist (Joint) in Paramedicine

Existing Course Sequence in Biology Department		Suggested Course Sequence in Department of Health and Society *NB this is a sample sequence, flexibility exists for certain courses to be taken in different terms or in different order, in certain cases. Students will be advised on options as appropriate.
		Blue = existing DHS Course / Black = existing CC course
<i>Year 1</i>	<i>Credits</i>	Year 1
BIOA01H3 Life on Earth: Unifying Principles	0.5	BIOA11H3 Introduction to the Biology of Humans
BIOA02H3 Life on Earth: Form, Function and Interactions	0.5	HLTA02H3 Exploring Health and Society: Theories, Perspectives, and Patterns
PSYA01H3 Introduction to Biological and Cognitive Psychology	0.5	HLTA03H3 Navigating Health and Society: Research, Practice, and Policy
PSYA02H3 Introduction to Clinical, Developmental, Personality and Social Psychology	0.5	HLTA20H3 Physiology Through the Life Course: From Birth Through Death
CHMA10H3 Introductory Chemistry I: Structure and Bonding	0.5	PSYA01H3 Introduction to Biological and Cognitive Psychology
CHMA11H3 Introductory Chemistry II: Reactions and Mechanisms	0.5	PSYA02H3 Introduction to Clinical, Developmental, Personality and Social Psychology
STAB22H3 Statistics I or PSYB07H3 Data Analysis in Psychology	0.5	STAB23H3 Introduction to Statistics for the Social Sciences
Elective	0.5	HLTB80H3 Paramedicine as a Community Based Health and Social Service
Elective	0.5	Elective
Elective	0.5	Elective

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<i>Year 2</i>		Year 2
BIOB10H3 Cell Biology	0.5	HLTB40H3 Health Policy and Health Systems
BIOB11H3 Molecular Aspects of Cellular and Genetic Processes	0.5	HLTB15H3 Health Research Methodology
PMDB33H3 Anatomy	0.5	PMDB33H3 Anatomy
PMDB22H3 Pre-Hospital Care 1: Theory and Lab	0.5	PMDB22H3 Pre-Hospital Care 1: Theory and Lab
PMDB25H3 Therapeutic Approaches and Crisis Intervention	0.5	PMDB25H3 Therapeutic Communications and Crisis Intervention
PMDB41H3 Professional and Legal Issues, Research, Responsibilities and Leadership	0.5	PMDB41H3 Professional and Legal Issues, Research, Responsibilities and Leadership
PMDB30H3 Alterations of Human Body Function I	0.5	PMDB30H3 Alterations of Human Body Function I
PMDB32Y3 Pre-Hospital Care 2: Theory, Lab and Clinical	1.0	PMDB32Y3 Pre-Hospital Care 2: Theory, Lab and Clinical
PMDB36H3 Pharmacology for Allied Health	0.5	PMDB36H3 Pharmacology for Allied Health
<i>Year 3</i>		Year 3
BIOB34H3 Animal Physiology	0.5	HLTB16H3 Public Health
BIOC17H3 Microbiology	0.5	HLTB41H3 Social Determinants of Health
BIOC34H3 Human Physiology II	0.5	Elective
PMDC40H3 Alterations of Human Body Function II	0.5	PMDC40H3 Alterations of Human Body Function II
PMDC42Y3 Pre-Hospital Care 3: Theory, Lab and Field	1.0	PMDC42Y3 Pre-Hospital Care 3: Theory, Lab and Field
PMDC43H3 Medical Directed Therapeutics and Paramedic Responsibilities	0.5	PMDC43H3 Medical Directed Therapeutics and Paramedic Responsibilities
PMDC54Y3 Pre-Hospital Care 4: Theory, Lab and Field	1.0	PMDC54Y3 Pre-Hospital Care 4: Theory, Lab and Field
PMDC56H3 Primary Care Practice Integration and Decision Making	0.5	PMDC56H3 Primary Care Paramedic Integration and Decision Making
<i>Year 4</i>		Year 4

Major Modification Proposal: Significant Modifications to Existing Undergraduate and Graduate Programs

BIOC21H3 Vertebrate Histology: Cells and Tissues or BIOC32H3 Human Physiology I	0.5	HLTB27H3 Applied Statistics for Public Health
PSYB20H3 Introduction to Developmental Psychology	0.5	HLTC81H3 Health Professions and Practice
PSYB32H3 Introduction to Clinical Psychology	0.5	PSYB32H3 Introduction to Clinical Psychology
Two of: BIOD33H3 Comparative Animal Physiology BIOD65H3 Pathologies of the Nervous System BIOD26H3 Fungal Biology and Pathogenesis BIOD17H3 Seminars in Cellular Microbiology BIOD43H3 Animal Movement and Exercise BIOD29H3 Pathobiology of Human Disease [or] BIOD96Y3 Directed Research in Paramedicine*]	1.0	Two of: HLTC19H3 Chronic Diseases or HLTC22H3 Health, Aging, and the Life Cycle or HLTC27H3 Community Health and Epidemiology or HLTC42H3 Emerging Health Issues and Policy Needs
PSYC08H3 Advanced Data Analysis in Psychology	0.5	One of*: HLTD80H3 Critical Health Education HLTD81H3 Health Professions Education (*or choose two of the research-based courses below instead of one of these two)
Elective	0.5	One of the following research-based courses: HLTD02H3 Health Research Seminar HLTD05H3 Directed Research on Health Services and Institutions HLTD71Y3 Directed Research in Health and Society HLTD82H3 Black Community Health: Education and Promotion [or] HLTD96Y3 Directed Research in Paramedicine
Elective	0.5	Elective
Elective	0.5	Elective
Elective	0.5	Elective

Appendix 2: New Department of Health and Society Specialist Proposed Program Objectives

The program objectives are being revised to reflect the transition from a biomedical focus within the Department of Biological Sciences to a broader, interdisciplinary healthcare approach under the Department of Health and Society. This shift moves beyond a biomedical framework to incorporate a comprehensive understanding of healthcare systems, public health, social determinants of health and other factors with enacting health care in society. This better prepare students for the complexities of contemporary healthcare delivery, leadership, and advocacy in diverse healthcare contexts, particularly where paramedicine can play a role, while leveraging evidence. Our revised objectives are as follows:

1. To prepare graduates for contemporary paramedicine practice within integrated healthcare systems by situating clinical training within a broader understanding of health systems, public health, and community-based models of care in Canada.
2. To position paramedicine within the interdisciplinary field of Health and Society by fostering an integrated understanding of biomedical science, social determinants of health, health equity, and chronic disease across diverse populations and care settings.
3. To cultivate evidence-informed practitioners and future leaders in healthcare by embedding research literacy, applied statistical reasoning, and critical inquiry into the study and practice of paramedicine.
4. To advance equitable, community-responsive healthcare delivery by preparing graduates to contribute to health advocacy, systems improvement, public health interventions, and collaborative, patient-centred care that addresses disparities and evolving population health needs.

Appendix 3: New Department of Health and Society Specialist Paramedicine Program Learning Outcomes

PLO1: Analyze the structure, funding models, governance, and operational frameworks of Canadian healthcare systems to determine implications for paramedic practice.

PLO2: Evaluate public health policies, resource allocation decisions, and system-level responses to community health needs in order to recommend strategies that improve equity, access, and health outcomes.

PLO3: Apply integrated knowledge of human anatomy, physiology, lifespan development, and pathophysiology to assess, plan, implement, and evaluate evidence-informed paramedic interventions.

PLO4: Apply knowledge of acute and chronic conditions, including mental health disorders, to assess patients, recognize changes in health status, and implement appropriate paramedic interventions within scope of practice.

PLO5: Examine the influence of social determinants of health, structural inequities, and cultural contexts on individual and community health outcomes.

PLO6: Design and justify community-responsive health promotion or disease prevention strategies that address identified population health needs within an integrated healthcare framework.

PLO7: Critically appraise health research literature using appropriate methodological and statistical principles to determine validity, reliability, and applicability to paramedic practice.

PLO8: Apply research principles to develop clinical or system-related questions and interpret evidence to inform decision-making.

PLO9: Examine effective collaboration within interprofessional teams to coordinate patient-centered care across healthcare and community settings.

PLO10: Analyze and respond to evolving professional, regulatory, and system-level challenges affecting paramedic practice and collaborative care delivery.

PLO11: Apply ethical principles, legal standards, and professional regulatory requirements to clinical decision-making and research activities in paramedicine.

Major Modification Proposal: Significant Modifications to Existing Undergraduate and Graduate Programs

PLO12: Evaluate ethical dilemmas in healthcare practice and defend decisions using established ethical frameworks and professional standards.

PLO13: Communicate clinical information, health education, and professional perspectives clearly and accurately in oral, written, and digital formats for diverse audiences, including patients, families, healthcare professionals, and policy stakeholders.

PLO14: Apply principles of diversity, equity, inclusion, and cultural safety to provide equitable, patient-centred paramedic care across diverse communities.

PLO15: Advocate within professional and community contexts for practices that promote health equity and reduce barriers to care.

PLO16: Apply principles of personal and professional wellbeing, including reflective practice, resilience, workload management, and psychological safety, to sustain safe, ethical, and effective paramedic practice across diverse and high-demand care environments.

Appendix 4: Biological Sciences Program Learning Outcomes and Mapping

Legend			
Introduce	Introduce/Reinforce	Reinforce/Mastery	Mastery
I	I/R	R/M	M

Note: All D-level options to complete the program develop Mastery, and as such (as for all other Biology programs) due to significant choice we have not mapped the specific courses (BIOD98 is mapped since it is a unique D-level to the program).

General Undergraduate Degree Level Learning Outcomes	BIOA11	BIOA01	BIOA02	BIOB10	BIOB11	BIOB34	BIOC17	BIOC21	BIOC32	BIOC34	PSYA01	PSYA02	PSYB20	PSYB32	CHMA10	CHMA11	STAB22	STAB23	PSYC08	PMDB33	PMDB22	PMDB25	PMDB41	PMDB30	PMDB32	PMDB36	PMDC40	PMDC42	PMDC43	PMDC54	PMDC56	PMDD96	
Depth and Breadth of Knowledge																																	
1. Apply quantitative reasoning and scientific principles to describe or explain phenomena in the natural world.		+	+	-	-	-	-	-	-	-	-	-	+	-	+	+	+	-	-	-	-				I/R				R/-				-
2. Engage in scientific inquiry and explain how scientific knowledge is discovered and validated.		+	+	-	-	-	-	-			-	-	+	-	+	+	+		-														
3. Explain basic phys. & chem. principles and identify some of their applications to the understanding of living systems and their		+	+	-	-	-	-	-	-						+	+																	

Major Modification Proposal: Significant Modifications to Existing Undergraduate and Graduate Programs

General Undergraduate Degree Level Learning Outcomes	BIOA11	BIOA01	BIOA02	BIOB10	BIOB11	BIOB34	BIOC17	BIOC21	BIOC32	BIOC34	PSYA01	PSYA02	PSYB20	PSYB32	CHMA10	CHMA11	STAB22	STAB23	PSYC08	PMDB33	PMDB22	PMDB25	PMDB41	PMDB30	PMDB32	PMDB36	PMDC40	PMDC42	PMDC43	PMDC54	PMDC56	PMDB06
hierarchical classification.																																
4. Describe how biomolecules, cell assemblies, organs, and organisms develop structure and carry out function.		+	+	WR	WR	WR	R/M	R/M	R/M	R/M										I							R/M					
5. Explain how organisms sense and control their internal environment, and how they respond to external changes.		+	+	WR	WR	WR	WR	WR	R/M	R/M										I							R/M					
6. Summarize the genetic principles that underpin speciation, evolutionary change, and reproductive success.	I	+	+		WR																											
7. Outline the principles of inheritance that govern phenotypes and the evolution of traits.	I	+		WR	WR		+	+																								
8. Explain how the large-scale structure of the biosphere arises		+	+			WR	+	+																								

Major Modification Proposal: Significant Modifications to Existing Undergraduate and Graduate Programs

General Undergraduate Degree Level Learning Outcomes	BIOA11	BIOA01	BIOA02	BIOB10	BIOB11	BIOB34	BIOC17	BIOC21	BIOC32	BIOC34	PSYA01	PSYA02	PSYB20	PSYB32	CHMA10	CHMA11	STAB22	STAB23	PSYC08	PMDB33	PMDB22	PMDB25	PMDB41	PMDB30	PMDB32	PMDB36	PMDC40	PMDC42	PMDC43	PMDC54	PMDC56	PMDB96
from interactions between organisms and populations, and natural phenomena.																																
9. Explain how energy is generated, transformed and utilized.		+	+	I/R	I/R	I/R	+	+	I/R	R/M																						
10. Outline the relationship between form and function as it applies to biological diversity.		+	+	I/R	I/R	I/R	I/R	I/R		+										I				I/R								
11. Discuss interdisciplinary foundations that inform human actions in environmental, technological and societal issues.		+	+	I/R	I/R		+	+	I/R	I/R	I	I	I/R	I/R									I			I/R		R/M	R/M	R/M	R/M	M
Program-level learning outcomes for Depth and Breadth of Knowledge																																
1. Integrate molecular and cellular level details to interpret organismal systems.			+	I/R	I/R	I/R	R/M	R/M	R/M	R/M																						M
2. Describe the different factors and their			+			+				R/M			+	I						I				I/R		I/R	R/M					

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General Undergraduate Degree Level Learning Outcomes	BIOA11	BIOA01	BIOA02	BIOB10	BIOB11	BIOB34	BIOC17	BIOC21	BIOC32	BIOC34	PSYA01	PSYA02	PSYB20	PSYB32	CHMA10	CHMA11	STAB22	STAB23	PSYC08	PMDB33	PMDB22	PMDB25	PMDB41	PMDB30	PMDB32	PMDB36	PMDC40	PMDC42	PMDC43	PMDC54	PMDC56	PMDD96	
combined effects that contribute to homeostasis and environmental impacts on humans from cellular to organismal level.																																	
3. Explain and predict the social and biological determinants of health that inform public policy and promote public health.	I		I	I/R	I/R	I/R	I/R	I/R			I	I	I/R	I/R							I	I	I		I/R	I/R		R/M	R/M	R/M	R/M	M	
Knowledge of Methodologies																																	
1. Identify and depict patterns in biological data.	I	I	I	I/R	I/R	I/R	R/M			I/R								I	I	R/M	I	I		I	I/R		I/R		R/M		R/M	R/M	M
2. Design controlled experiments using appropriate methodology and instrumentation.							R/M																										
3. Formulate hypotheses and develop strategies to investigate them.		I	I	I/R	I/R	I/R	R/M								I	I					I		I									M	
4. Describe how data are collected.		I	I				R/M			I/R			I/R	I/R	I	I			I		I		I		I/R	I/R		R/M		R/M	R/M	M	
5. Employ proper statistical methods to analyze and	I	I	I				R/M			I							I	I	M/R	I	I		I/R		I/R		R/M		R/M	R/M	M		

Major Modification Proposal: Significant Modifications to Existing Undergraduate and Graduate Programs

General Undergraduate Degree Level Learning Outcomes	BIOA11	BIOA01	BIOA02	BIOB10	BIOB11	BIOB34	BIOC17	BIOC21	BIOC32	BIOC34	PSYA01	PSYA02	PSYB20	PSYB32	CHMA10	CHMA11	STAB22	STAB23	PSYC08	PMDB33	PMDB22	PMDB25	PMDB41	PMDB30	PMDB32	PMDB36	PMDC40	PMDC42	PMDC43	PMDC54	PMDC56	PMDD06
predict patterns in biological data.																																
Application of Knowledge																																
1. Acquire and collate the information and data relevant to a given biological question, and objectively interpret these data to draw an informed conclusion.	I	+	+	I/R	I/R	I/R	M/R	M/R										I			I		I	I/R		I/R	M/R	M/R	M/R	M/R	M/R	M
2. Describe the progression and process from data collection to model building.				I/R	I/R	I/R	I/R											I	M/R										M/R			M
3. Integrate and apply knowledge across all levels of biological scale and complexity.				+	+	+	I/R	I/R	I/R	I/R																I/R				M/R		
4. Develop new inquiries, methodologies and testable hypotheses based on analysis of data.				+	+	+	M/R											I			I		I									M
5. Contribute to interdisciplinary research exchange.				+	+	+																	I									

Appendix 5: Ministry of Health Paramedic Program Standards (these remain unchanged in this program modification).²



Paramedic Program Standard

*The approved program standard for the
Paramedic program of instruction leading to
an Ontario College Diploma delivered by
Ontario Colleges of Applied Arts and
Technology (MTCU funding code 51637)*

Ministry of Training, Colleges and Universities
June 2008

Synopsis of the Vocational Learning Outcomes Paramedic Program

The graduate has reliably demonstrated the ability to

1. communicate and interact effectively and appropriately with patients* and others.
2. assess patients* using relevant theory and practices and in compliance with current legislation*, regulations*, standards, and best practice* guidelines*.
3. establish patients'* treatment and transport priorities based on assessment findings*.
4. implement preventive and therapeutic patient management strategies* to maintain and promote patients'* well-being in compliance with current legislation*, regulations*, standards, and best practice* guidelines*.
5. integrate and perform delegated controlled medical acts* in a simulated, clinical, and field setting*.
6. evaluate in an ongoing manner the effectiveness of patient management strategies* used and adapt or change strategies to provide optimal care* for patients*.
7. report and document patient* information completely, accurately, and in a timely manner, in compliance with current legislation*, regulations*, standards, and applicable policies and procedures in a simulated, clinical, and/or field setting*.
8. ensure personal safety* and contribute to the safety of partners, patients*, and others.
9. ensure the operational safety* and preparedness of an ambulance* and its equipment and operate an ambulance-type vehicle in a simulated setting.
10. collaborate* with a broad range of personnel such as first responders, paramedics*, emergency services personnel, health care professionals, and other allied health care workers.
11. integrate and meet legal, ethical, and professional* responsibilities while providing optimal care* for patients*.

* See Glossary

Note: The vocational learning outcomes have been numbered as a point of reference; numbering does not imply prioritization, sequencing, nor weighting of significance.

² <https://www.ontario.ca/page/college-program-standard-paramedic>

Appendix 6: Degree Level Expectations, Program Learning Outcomes and Requirements

<u>Degree-Level Expectations</u>	<u>Program Learning Outcomes</u>	<u>How the Program Design/Structure Supports the Degree Level Expectations</u>
1. Depth and Breadth of Knowledge Depth of Knowledge: Programs of study will attain depth through a progression of introductory, core and specialized courses. Specialized courses will normally be at the C and D levels. This basic requirement is further refined in the three sections Knowledge of Methodologies, Application of Knowledge and Awareness of Limits of Knowledge. Breadth of Knowledge: In the course of their studies, students will gain an appreciation of the variety of modes of thinking, methods of inquiry and analysis, and ways of understanding the world that underpin different intellectual fields. Through courses within or outside of their programs of study, students will be exposed to an appropriate balance of: the arts, literature and history of human cultures, the social and behavioral sciences, the natural sciences, and quantitative reasoning.	Students will demonstrate integrated understanding of Canadian healthcare systems, public health policy, and population health contexts (PLO1, PLO2, PLO5). They will apply comprehensive biomedical and clinical knowledge, including anatomy, physiology, lifespan development, pathophysiology, and management of acute and chronic conditions, to inform paramedic assessment and intervention (PLO3, PLO4). Students will also demonstrate understanding of health promotion, disease prevention, and community-responsive care within integrated healthcare systems (PLO6).	The program supports progressive development from foundational disciplinary knowledge toward advanced clinical and systems integration. Foundational learning in the natural sciences is established through BIOA11H3 <i>Introduction to the Biology of Humans</i>, HLTA20H3 <i>Physiology Through the Life Course</i>, and PSYA01H3 <i>Introduction to Biological and Cognitive Psychology</i>. These courses establish the scientific grounding necessary for subsequent clinical learning. Depth is further developed through biomedical and paramedicine coursework, including PMDB33H3 <i>Anatomy</i> and the sequenced pre-hospital care curriculum, which progressively integrates theoretical knowledge with applied clinical reasoning and intervention planning. Breadth is achieved through sustained engagement with social science, population health, policy, and interprofessional perspectives. Courses such as HLTB16H3 <i>Public Health</i>, HLTB41H3 <i>Social Determinants of Health</i>, and HLTB40H3 <i>Health Policy and Health Systems</i> support analysis of health inequities and system organization. HLTC81H3 <i>Health Professions and Practice</i> and HLTB80H3 <i>Paramedicine as a Community-Based Health and Social Service</i> further extend interdisciplinary understanding. Elective opportunities allow students to engage with

		additional social science or humanities-informed perspectives on health and care.
2. Knowledge of Methodologies Students will have a working knowledge of different methodologies and approaches relevant to their area of study. They will be able to evaluate the efficacy of different methodologies in addressing questions that arise in their area of study.	Students will demonstrate knowledge of qualitative, quantitative, and mixed research methodologies relevant to paramedic practice and health systems inquiry (PLO7, PLO8). They will critically appraise evidence and apply research processes to generate clinically and system-relevant questions that inform practice and policy.	Methodological competence develops through staged exposure to statistical reasoning, research design, and applied inquiry. Quantitative literacy is introduced through STAB23H3 <i>Statistics for the Life Sciences</i> or PSYB07H3 <i>Statistics I</i>, and extended through HLTB27H3 <i>Applied Statistics for the Health Sciences</i>. Core methodological frameworks are introduced in HLTB15H3 <i>Introduction to Health Research Methodology</i>, which provides grounding in diverse research approaches relevant to healthcare contexts. These competencies are reinforced through PMDB41H3 <i>Professional Issues, Research and Leadership</i>, where students engage in evidence-informed decision-making. Advanced integration occurs through structured research pathways, including HLTB49Y3 <i>Directed Research in Health Studies</i>, HLTB48H3 <i>Directed Reading in Health Studies</i>, and supervised inquiry experiences. These curricular elements enable students to design, conduct, and interpret research addressing clinical, organizational, and population health questions.

3. Application of Knowledge Within their area of study students will be able to frame relevant questions for further inquiry. They will be familiar with or will be able to seek the tools with which they can address such questions effectively.	Students will apply theoretical and empirical knowledge to complex clinical and system contexts, integrating biomedical, social, ethical, and policy considerations in decision-making (PLO3, PLO4, PLO10, PLO11). They will design and implement evidence-informed approaches that address social determinants of health and evolving professional and regulatory environments (PLO2, PLO5, PLO15).	Application is supported through progressive integration of scientific, clinical, and systems-level learning. Foundational clinical competencies are established through the sequenced paramedicine curriculum, beginning with PMDB22H3 <i>Pre-Hospital Care I</i> and advancing through increasingly complex clinical integration experiences. Biomedical knowledge is reinforced through PMDB33H3 <i>Anatomy</i>, while behavioural competencies are developed through PMDB25H3 <i>Therapeutic Approaches to Behaviour in Crisis</i>. These courses support application of interdisciplinary knowledge in clinical contexts. System-level application is further developed through HLTB40H3 <i>Health Policy and Health Systems</i> and HLTC81H3 <i>Health Professions and Practice</i>, which situate clinical decision-making within regulatory and collaborative care environments. Directed research and elective coursework enable students to apply knowledge to complex health system and population health challenges.
4. Awareness of Limits of Knowledge Students will gain an understanding of the limits to their own knowledge. They will also gain an appreciation of the uncertainty, ambiguity, and limits to our collective knowledge and how these might influence analyses and interpretations.	Students will demonstrate reflective awareness of the limits of knowledge and practice, including ethical uncertainty, evolving professional scopes, and structural influences on health outcomes (PLO10, PLO12, PLO5, PLO14).	Awareness of epistemic and professional limits develops through engagement with uncertainty, ethical complexity, and evolving health system contexts. Courses such as HLTB41H3 <i>Social Determinants of Health</i>, PSYB32H3 <i>Abnormal Psychology</i>, and HLTC81H3 <i>Health Professions and Practice</i> support critical examination of ambiguity in diagnosis, intervention, and professional roles.

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		Research training in HLTB15H3 <i>Introduction to Health Research Methodology</i> and supervised scholarly inquiry reinforces understanding of methodological limitations and evidentiary uncertainty. Clinical coursework further supports recognition of scope boundaries and decision thresholds in complex care environments.
5. Communication Skills Students will be able to communicate information, arguments, and analyses accurately and reliably, both orally and in writing. Students will learn to read and to listen critically.	Students will communicate clinical information, research findings, and professional perspectives accurately and effectively across oral, written, and digital formats (PLO13). They will collaborate effectively within interprofessional teams to support patient-centred care (PLO9).	Communication competencies develop longitudinally through academic, clinical, and interprofessional learning contexts. Foundational analytical and written communication skills are established in HLTA02H3 <i>Understanding Health and Society</i> and HLTA03H3 <i>Research, Practice and Policy</i>. Professional and collaborative communication is further developed through HLTC81H3 <i>Health Professions and Practice</i> and PMDB41H3 <i>Professional Issues, Research and Leadership</i>. Clinical communication, documentation, and patient education skills are embedded throughout the paramedicine curriculum. Directed research experiences support development of scholarly communication.
6. Autonomy and Professional Capacity In a broader context, the education students receive while pursuing their degrees has three further goals: to give students the skills and knowledge they need to become informed, independent and creative thinkers; to	Students will demonstrate ethical responsibility, professional accountability, and sound judgement in clinical and research contexts (PLO11, PLO12). They will apply principles of wellbeing and reflective practice to sustain professional performance	Professional autonomy develops through integrated exposure to ethical reasoning, regulatory frameworks, leadership development, and reflective practice. PMDB41H3 <i>Professional Issues, Research and Leadership</i> and HLTC81H3 <i>Health Professions and Practice</i> support professional identity formation and governance awareness.

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instill the awareness that knowledge and its applications are influenced by and contribute to society; and to lay the foundation for learning as a life-long endeavour.	(PLO16), and advocate for equitable and effective healthcare practices (PLO15).	Population health and policy coursework situates decision-making within broader system contexts. Behavioural health and community paramedicine coursework support development of resilience and culturally responsive care. Sequenced clinical and scholarly learning experiences collectively support readiness for independent professional practice and lifelong learning.
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Appendix 7: Program Mapping

[illegible]