



EPIDEMIOLOGY

Health Services Management

Course Code: EPID2001	Co-Requisites: Please see Course Related Information	Pre-Requisites: STAT2001
Applicable Program(s): C139 - Health Information Management	Core/Elective: Core	
Prepared by:	Taras Gula, professor	
Approved by:	Denise Devlin-Li, Associate Dean	
Approval Date:	Sunday, January 12, 2025	
Approved for Academic Year:	2024-2025	
Contact Hours:	42.00	
Credit Hours:	3.00	

Course Description

This is an introductory epidemiology course that aims to develop the language and the basic tools of epidemiological research. Though there will be some calculations involved the focus is on concepts and their applications as well as using all of the above in order to evaluate and interpret epidemiological research articles.

Essential Employability Skills

This course contributes to your program by helping you achieve the following Essential Employability Skills:

- EES 1 **COMMUNICATION:** Communicate clearly, concisely and correctly in the written, spoken and visual form that fulfills the purpose and meets the needs of the audience. (T, P, E,)
- EES 2 **COMMUNICATION:** Respond to written, spoken or visual messages in a manner that ensures effective communication. (T, P, E,)
- EES 3 **NUMERACY:** Execute mathematical operations accurately. (T, P, E,)
- EES 4 **CRITICAL THINKING & PROBLEM SOLVING:** Apply a systematic approach to solve problems. (T, P, E,)
- EES 5 **CRITICAL THINKING & PROBLEM SOLVING:** Use a variety of thinking skills to anticipate and solve problems. (T, P, E,)
- EES 6 **INFORMATION MANAGEMENT:** Analyze, evaluate and apply relevant information from a variety of sources. (T, P, E,)
- EES 7 **INFORMATION MANAGEMENT:** Locate, select, organize and document information using appropriate technology and information systems. (T, P, E,)

- EES 8 INTERPERSONAL: Show respect for diverse opinions, values, belief systems and contributions of others. (P,)
- EES 9 INTERPERSONAL: Interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals. (P,)
- EES 10 PERSONAL: Manage the use of time and other resources to complete projects. (T, P,)
- EES 11 PERSONAL: Take responsibility for one's own actions, decisions and consequences. (P,)

Note: "T" means elements of the skill are taught; "P" means elements of the skill are practiced; "E" means elements of the skill are evaluated; "C" means the skill culminates.

Course Learning Outcomes

When you have earned credit for this course, you will have demonstrated the ability to:

- CLO 1 Describe major elements of the history, goals and concepts of epidemiology including physical and social determinants of health and their use in health policy, and the tools used to realize those goals.
- CLO 2 Describe and distinguish between descriptive and analytic epidemiology; use the classification system used to distinguish different types of research (including case control, cohort, cross-sectional) in reading journal articles.
- CLO 3 Calculate and interpret various measures of disease occurrence and comparison: e.g. incidence, prevalence, mortality, case fatality, relative risk, odds ratio, screening effectiveness and age standardization.
- CLO 4 Read, and interpret full length health sciences research journal articles, including an assessment of evidence provided and its ability to establish a causal relationship between exposure and outcome. Use these skills to conduct a literature review, and use that information to contribute to designing and carrying out a simulated task force project.
- CLO 5 Distinguish between internal and external validity and identify sources of bias and confounding in epidemiological studies, and methods taken to mitigate their effect. Use validity checklist provided to assess the validity of individual research studies.
- CLO 6 Identify major sources of health data in Canada, and the methods used to collect the data.

Delivery Methods/Learning Activities

The instructional methods of this course consist of active learning through exercises, dynamic lectures, and includes one large group project through which students practice using the thinking tools they are exposed to. A mastery based approach to evaluation ensures that core concepts are mastered through multiple attempts.

Learning Resources

LIST OF TEXTBOOKS AND OTHER TEACHING AIDS:

Required:

1. **Aschengrau, A. Seage, G.R.** Essentials of Epidemiology in Public Health 3rd ed. Jones and Bartlet publishers; c 2014; ISBN-13: 978-1-284-02891-1
2. Scientific calculator + www.stataras.com site; bit.ly/henupr

Optional:

Greenberg, Raymond S., Medical Epidemiology; McGraw-Hill Co. c. 2005
ISBN 979-007-141637-5

Course Related Information

Stat2001 is a pre-requisite

George Brown Related Information

ACKNOWLEDGEMENT OF THE TRADITIONAL LAND

George Brown College is located on Treaty 13, the traditional territory of the Mississaugas of the Credit First Nation and neighbouring Indigenous Peoples who continue to live in the area. Today, this meeting place is still home to many distinct Indigenous peoples from across Turtle Island. We are grateful to share this land as treaty people who learn, work, and live in the community with each other.

PROGRAM LEARNING OUTCOMES

College programs are designed to deliver program learning outcomes that relate to the unique content of a particular area of study. To review the specific program learning outcomes for your program, please go to your program page on the George Brown College website at <https://www.georgebrown.ca/>

IMPORTANT PROGRAM INFORMATION

Students are advised to consult program coordinators regarding specific requirements for successfully completing their program, including adding/dropping courses and other issues that might disrupt their course of study.

RETENTION OF COURSE OUTLINES

Students are expected to retain their course outlines to support learning in the course and for future use in applications for transfer of credit to other educational institutions.

COLLEGE POLICIES

It is essential that students review all college policies, including Academic Policies available at <https://www.georgebrown.ca/policies>.

ACADEMIC INTEGRITY

Academic Integrity is a commitment, even in the face of adversity, to honesty, trust, fairness, respect, responsibility,

and courage. Academic integrity ensures the credibility of our education system, promotes fair assessment, and prepares students for ethical professional practices. Use of unauthorized assistance in any form of academic work (e.g., assignments, written tests or assessments, portfolios, or any other assessment) is prohibited and constitutes academic misconduct.

Academic misconduct occurs when a student engages in a breach (such as cheating, plagiarism, or failing to disclose the use of Generative AI) to try to gain an unfair advantage. Students are required to read and understand the College's Academic Integrity Policy. If you are uncertain about academic integrity expectations, including whether the use of generative AI is permitted, please speak to your professor. To support these principles, professors may request the use of various tools, including text matching software, to detect and prevent academic integrity violations.

DIGITAL LEARNING REQUIREMENTS

Students are required to have access to a computer and to the internet. There may also be additional technology-related requirements to participate in a course, such as headphones, webcams, specialized software, etc. Details on these requirements can be found in the course outline for each course.

The Library Learning Commons (LLC) has a limited number of devices including laptops and portable WIFI devices to support students; however, the LLC cannot guarantee access to a device for all students.

ACCESSIBLE LEARNING SERVICES FOR STUDENTS

Accessible Learning Services facilitates academic support and services for George Brown College students with physical, sensory, learning, medical or mental health disabilities. Delivered in collaboration with academic departments and other service areas, these services are available to students in all programs at all campuses.

George Brown College is committed to upholding a student's right to individualized and timely accommodation that promotes dignity, independence, autonomy, equity, and inclusion for the student. In addition to our current supports, we are working to eliminate barriers by increasing access to alternate formats, planning accessible buildings and classrooms, enhancing employee training, and adopting inclusive practices in placement and on campus.

Only those involved in a student's accommodation plan shall be alerted to their registration with Accessible Learning Services, and a student's registration with Accessible Learning Services will not be identified on the student's official college transcript and/or graduation documentation. For more information, please visit the Accessible Learning Services website at <http://www.georgebrown.ca/accessible-learning-services/> or call 416-415-5000 ext. 2622 or email letstalk@georgebrown.ca

EQUITY STATEMENT

George Brown College values the diversity of our students, employees, and community partners, and is committed to providing a learning environment where all people are safe and respected. Comments, behaviours, or interactions that are inconsistent with our values may be a violation of the following college policies: Sexual Assault and Sexual Violence, Human Rights Discrimination and Harassment, and the Prevention of Workplace Violence and Harassment. These types of actions or comments are not acceptable and will not be tolerated. The commitment and

cooperation of all students and employees is required to maintain a welcoming environment in which to learn and work.

Support and information are available through a Human Rights Advisor at diversity@georgebrown.ca or the Sexual Violence Response Advisor at svra@georgebrown.ca

For information on the relevant policies visit <https://www.georgebrown.ca/diversity/>

Student Evaluation System

Below is a list of evaluation methods included in this course along with the course learning outcomes (CLO) and essential employability skills (EES) assessed by each. In some cases, program learning outcomes (PLO) assessed may also be indicated.

Quiz / Quizzes (2%)

stat2001 review

Validates Outcomes: CLO 3, EES 3

Quiz(es) / Summative (5%)

mastery of foundational concepts

Validates Outcomes: CLO 1, EES 2

Test(s) (8%)

classify scenarios

Validates Outcomes: CLO 2, EES 2, EES 4

Test (20%)

calculate frequencies and comparison of frequencies + convert scenario to contingency.

Validates Outcomes: CLO 3, EES 3, EES 7

Test (15%)

Interpret tables from research journals. Calculate and interpret in screening scenario.

Validates Outcomes: CLO 2, CLO 3, EES 2, EES 3, EES 4

Test (15%)

Read, interpret and evaluate full journal article.

Validates Outcomes: CLO 4, CLO 5

Assignment(s) (10%)

Literature Review

Validates Outcomes: CLO 4, EES 1, EES 5, EES 6, EES 7

Research Assignment (25%)

Task Force Group Project

Validates Outcomes: CLO 4, CLO 5, CLO 6, EES 1, EES 2, EES 4, EES 5, EES 6, EES 7

Prior Learning Assessment and Recognition

Prior learning assessment and recognition (PLAR) is a process that gives students the opportunity to obtain academic credit for one or more courses in a certificate, diploma or degree based on demonstrated prior learning acquired through life experiences before enrollment in a program. More information regarding PLAR can be found on the GBC website at: <http://www.georgebrown.ca/plar/>

- This course is PLAR eligible, please see Program Coordinator/Chair for more information.

Grading System

The passing grade for this course is 60% / "C-"

Final Grade	Percentage	Weight
A+	90-100	4.0
A	86-89	4.0
A-	80-85	3.7
B+	77-79	3.3
B	73-76	3.0
B-	70-72	2.7
C+	67-69	2.3
C	63-66	2.0
C-	60-62	1.7
F	Below 60	0.0

Refer to the Evaluation System on this outline for information on how marks are distributed. More detailed information on assessments may also be found in your Course Section document.

As per Office of the Registrar Policies:

"A" Range = GPA 4.0-Consistently exceeds (course) requirements; shows evidence of being well-organized; shows original and creative thinking and a superior grasp of subject matter.

"B" Range = GPA 3.0-Shows consistent performance and evidence of being well-organized, shows elements of original and creative thinking; has a strong grasp of subject matter

"C" Range = GPA 2.0-Applies the subject matter appropriately; comprehends the subject matter."

"F" Range = GPA 0.0-The student fails to apply and communicate an understanding of the subject matter.

Additional information regarding grading for this course may also be found in the "Course Related Information" section of this course outline.

Legend

Terms

- ILO: Indigenous Learning Outcome
- Apprenticeship LO: Apprenticeship Learning Outcome
- CLO: Course Learning Outcome
- DPLO: Degree Program Learning Outcome
- EES: Essential Employability Skill
- EOP: Element of Performance
- GELO: General Education Learning Outcome
- LO: Learning Outcome
- APO: Additional Program Outcome
- PLA: Prior Learning Assessment
- PLAR: Prior Learning Assessment and Recognition
- PLO: Program Learning Outcome