UNIVERSITY OF ALBERTA
Faculty of Nursing Undergraduate Programs
BScN COLLABORATIVE PROGRAM
Grande Prairie Regional College, Keyano College,
Red Deer College, University of Alberta

NURS 211: Keyano College
Statistics and Knowledge Management
COURSE OUTLINE

Note: students are expected to familiarize themselves with this course outline, the BScN Program Student Handbook and Moodle site.

Calendar statement

★3 (credits) An introduction to reading, understanding, and interpreting commonly used statistics in published health sciences research. The course provides a hands-on approach to understanding measurement, sampling, and statistical analysis techniques commonly used in health care research. It introduces the concepts of information literacy, health data and big data in electronic datasets and the statistical techniques used to interpret these data in meaningful ways. Note: Available only to nursing students in the BScN Collaborative Program. Students must achieve a minimum grade of C- in order to progress in the program. Credit may be obtained for only one of NURS 211 or 388.

Course hours (for this term)

Lecture: 45 hours	Seminar: 0	Lab: 0

Learning Outcomes

Upon completion of this course, the student will be able to:
1. Identify and explain levels of measurement.
2. Identify and explain descriptive statistics (measures of central tendency, measures of dispersion).
3. Identify and explain null and alternative hypotheses, and hypothesis testing.
4. Explain the concepts of reliability and validity in relation to measurement tools
5. Interpret results of parametric and non-parametric tests
6. Interpret statistical results presented in graphs and tables, including meta-analysis tables
7. Apply sampling and probability theories to the interpretation of health-related research
8. Describe ways in which statistics can be used to inform clinical judgement
9. Discuss the ways in which statistics help to build evidence that can be used to inform clinical judgement.

Course contacts (please refer to the contact list for this course on eClass)

Title	Name	Office number	Phone number	email
Teaching Team Lead	Melissa Brown, BN, RN	Online	780-972-6830	Melissa.brown@keyano.ca

Note:
- Please allow 2 business days for a response. Include your course name in your subject line.
- Professional and respectful communication is expected.

Communication:

It is the students' responsibility to ensure that they check Moodle courses <u>at minimum of twice daily, once in morning and evening</u>. It is recommended to check Moodle more frequently. It is the students' responsibility to ensure thorough review of all resources and content on the Moodle course site. The instructors have placed many resources and documents to ensure the students' success in each course.

Instructors will communicate with the student group by announcements in the news forum on Moodle. Please ensure that you check this at least twice daily.

It is the students' responsibility to <u>check their Keyano College email at minimum of twice daily</u>, once in morning and again in evening. It is recommended to check email more frequently. Please note that the method to contact your instructor is email, unless otherwise instructed. Please allow a 48 hour minimum response time from your instructor on business days. Instructors will not be checking emails on evenings and weekends/holidays.

Required textbooks

(Note: Foundation textbooks will be used as references throughout the program. Please retain your copies as they will be required resources in future courses).

The 4th or 5th editions of the following textbooks are acceptable.

LoBiondo-Wood, G., Haber, J., Cameron, C., & Singh, M.D. (Eds.). (2018). *Nursing research in Canada: Methods, critical appraisal and utilization for evidence-based practice* (4th ed.). Toronto, ON: Elsevier Canada.

Wood, G., Haber, J., & Samuels-Dennis, J. (Eds.). (2018). *Study guide: Nursing research in Canada: Methods, critical appraisal and utilization for evidence-based practice.* (4th ed.). Toronto, ON: Elsevier Canada.

Required supplies

None

Required fee(s)

None

Supplemental Textbooks & Resources

Please refer to Moodle for this course site.

Course evaluation

Assignments/Course components	Dates	Weight	Course objectives no.
1. Participation 　　Module Forum Posts 　　Assignment One: Levels of Measurement	See Timetable	15%	1-9
2. Assignment Two: Measures of Central Tendency	See Timetable	25%	2
3. Assignment Three: Inferential Statistics	See Timetable	25%	1, 3, 4, 5, 6
4. Final Examination	See Timetable	35%	1-9

Assignments descriptions

1) Participation

Students will choose and answer at least **one** provided question in each module forum. There are a total of four modules in this course. Students are also required to respond to a forum post for a total of **two** forum posts per module for full marks.

Assignment One: Levels of Measurement will be completed as a class during lecture two in Module One. Students will be required to submit Assignment 1 for participation marks.

See marking guide for additional guidelines (Appendix A).

2) Assignment Two: Measures of Central Tendency

Students will demonstrate application of measures of central tendency concepts by examining research results and answering questions. See Marking Guide for additional guidelines (Appendix B).

3) Assignment Three: Inferential Statistics

Students will demonstrate application of inferential statistic concepts by examining research results and answering questions. See marking guide for additional guidelines (Appendix C).

4) Final Examination:
Cumulative exam at end of course. 80 multiple choice questions with 150 minutes to write.

Final grades

The assignments are marked as raw scores according to the percentage weight assigned to each. The marks on course assignments will contribute to the overall letter grade according to the percentage that each assignment is weighted in the course. At the end of the course, all assignment scores are totaled for a term summary mark in the course based on the grading scale below. The FINAL COURSE GRADE is based on the cumulative total of individual student's weighted assignment marks.

Keyano College Percentage-Alpha Grading System

Descriptor	Percentage Scale	Alpha Scale	GPA
Excellent	96-100	A+	4.0
	90-95	A	4.0
	85-89	A-	3.7
Good	80-84	B+	3.3
	76-79	B	3.0
	72-75	B-	2.7
Satisfactory	68-71	C+	2.3
	64-67	C	2.0
Minimum Pass	60-63	C-	1.7
Poor	55-59	D+	1.3
	50-54	D	1.0
Failure	0-49	F	0.0

Student Responsibilities

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

Student Attendance

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

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

Academic Misconduct

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

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

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

To ensure your understanding of the concept of plagiarism, you must successfully complete the online tutorial found on ilearn.keyano.ca. Then print the certificate, sign it, and show it to each of your instructors. Your course work may not be graded until you show this signed certificate.

Specialized Supports

The Student Services department is committed to Keyano students and their academic success. There are a variety of student supports available at Keyano College. Due to the continuing situation with the Covid-19 pandemic, the offered support services will be implemented differently this semester by being provided mostly virtually. In-person service can be requested as needed. All Alberta Health Services guidelines will be followed for in-person appointments—wear a mask, maintain two meters of physical distance, use hand sanitizer, and stay home if you are unwell.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

E Learning

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

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

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

Internet Speed
Minimum Internet speeds of 10 Mbps.
Recommended Internet speeds of 25 Mbps (especially if you are sharing your internet at home).
Check your internet speed with Fast.com.

System requirements:

Microsoft Windows	Apple
Minimum Requirements: A Windows 10 **computer/laptop** · Minimum 4GB of RAM. · 10GB+ available hard drive storage. · Enough available hard drive space to install the Microsoft Office suite (approximately 3GB). Microsoft Office software is free to all Keyano students and employees. · Microphone, webcam and speakers. A headset with a microphone is recommended. · System updates must be regularly installed. · Anti-Virus / Anti-Malware software	**Minimum Requirements:** A Macintosh (V10.14 and above) **computer/laptop** · Minimum 4GB of RAM. · 10GB+ available hard drive storage. · Enough available hard drive space to install the Microsoft Office suite (approximately 3GB). Microsoft Office software is free to all Keyano students and employees. · Microphone, webcam and speakers. A headset with a microphone is recommended. · System updates must be regularly installed. · Anti-Virus / Anti-Malware software.
Recommended Requirements · 8GB of RAM · A method of backing up/synchronizing to local or cloud-based storage such as OneDrive is highly recommended. This is included if you complete the setup of KeyanoMail and download MS Office using your Keyano email for free.	**Recommended Requirements** · 8GB of RAM · A method of backing up/synchronizing to local or cloud-based storage such as OneDrive is highly recommended. This is included if you complete the setup of KeyanoMail and download MS Office using your Keyano email for free.
Chromebooks are **not** recommended as they are not compatible with testing lockdown browsers. A Microsoft Surface or iPad or iPad Pro may be possible alternatives in some program areas.	

Specific Department Requirements:

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

Computer Software

Students will be able to get access to Microsoft Office 365 for free using Keyano credentials by clicking here.

Recording of Lectures and Intellectual Property

Students may only record a lecture if explicit permission is provided by the instructor or by Accessibility Services. Even if students have permission to record a lecture or lecture materials, students may not share, distribute, or publish any of the lectures or lecture materials, this includes any recordings, slides, instructor notes, etc. on any platform. Thus no student is allowed to share, distribute, publish or sell course related content (instructor, or students) without permission. It is important to recognize that the Canadian Copyright Act contains provisions for intellectual property. The Academic Integrity Policy provides additional information on Keyano College's expectations from students as members of the intellectual community.

ITS Help Desk

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

Appendix A – Participation Marking Guide

<table>
<tr><td colspan="3" align="center">PARTICIPATION MARKING GUIDE</td></tr>
<tr><td></td><td align="center">Criteria</td><td align="center">Marks</td></tr>
<tr>
<td>Forum Discussion Posts</td>
<td>

One question is chosen and answered in each Module 1-4.
Rationale is provided to support answer.
Replies to one classmate's forum post in each module with thoughtful feedback, insight, or provides additional information in support of the original post.

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<td align="center">/20</td>
</tr>
<tr>
<td>Assignment #1</td>
<td>

Title Page/Reference Page
Questions answered correctly (as per class and instructor participation in lecture two).
Rationale provided when required.

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<td align="center">/10</td>
</tr>
<tr>
<td colspan="2" align="right">Total</td>
<td align="center">/30</td>
</tr>
<tr>
<td colspan="3">Instructor Notes:</td>
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</table>

Appendix B – Assignment Two Marking Guide

<table>
<tr><td colspan="3">ASSIGNMENT TWO MARKING GUIDE

MEASURES OF CENTRAL TENDENCY</td></tr>
<tr><td></td><td>**Criteria**</td><td>**Marks**</td></tr>
<tr><td>**Accuracy of Assignment Answers**</td><td>• Questions answered correctly.
• Rationale provided when required.</td><td>/50</td></tr>
<tr><td>**APA and Formatting**</td><td>• Title Page/Reference Page
• All sources of information are clearly identified and credited using APA citations</td><td>/6</td></tr>
<tr><td colspan="2" align="right">**Total**</td><td>/56</td></tr>
<tr><td colspan="3">Instructor Notes:</td></tr>
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Appendix C – Assignment 3 Marking Guide

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ASSIGNMENT 3 MARKING GUIDE

INFERENTIAL STATISTICS

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<tr>
<td></td>
<td><div align="center">**Criteria**</div></td>
<td><div align="center">**Marks**</div></td>
</tr>
<tr>
<td>**Accuracy of Assignment Answers**</td>
<td>

- Questions answered correctly.
- Rationale provided when required.

</td>
<td><div align="center">/34</div></td>
</tr>
<tr>
<td>**APA and Formatting**</td>
<td>

- Title Page/Reference Page
- All sources of information are clearly identified and credited using APA citations

</td>
<td><div align="center">/6</div></td>
</tr>
<tr>
<td colspan="2"><div align="right">**Total**</div></td>
<td><div align="center">/40</div></td>
</tr>
<tr>
<td colspan="3">Instructor Notes:</td>
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</table>