THE UNIVERSITY OF LETHBRIDGE
FACULTY OF HEALTH SCIENCES
HLSC/PSYC 3450 – APPLIED STATISTICS FOR CLINICAL PRACTICE
Course Syllabus – Spring, 2016
(January 6 – April 15, 2016)

"I always find that statistics are hard to swallow and impossible to digest. The only one I can ever remember is that if all the people who go to sleep in church were laid end to end, they would be a lot more comfortable."

~Mrs. Robert A. Taft

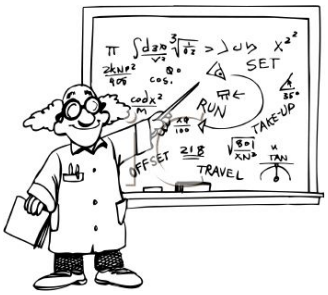
"There are three kinds of lies – lies, damned lies and statistics."

~Benjamin Disraeli

"Statistics are human beings with the tears wiped off."

~Paul Brodeur

COURSE DESCRIPTION:



"Statistics." The word itself is usually enough to strike fear into the hearts of many students – and is about as popular as other words like "cancer," "root canal," "student loan repayments," and "APA format."

Fortunately, taking a statistics course doesn't have to be like a semester-long version of the worst episode of "Fear Factor" you've ever seen. In fact, taking a course in statistics *should* actually be interesting, enjoyable – and dare we say…fun?

As clinicians and practitioners in health-related/clinical disciplines, you *do* need to understand how numbers and statistics are used in fields like nursing, addictions counselling, public health, psychology, and so on. Much of the "evidence" used in evidence-based practice – in addition to many budget-related decisions – is grounded in numbers, data and statistics. In addition, many people in life will be trying to persuade you to do or buy things based upon statistics, so you need to know when you're being given the 'real goods' – or when people are simply 'lying with statistics.'

The purpose of this course is to give any undergraduate student – but particularly students in health sciences and psychology – a good foundational understanding of how quantitative data (numbers) and statistics are used as part of evidence-based professional practice. As such, this course will focus on the *practical understanding and application* of statistics, as opposed to a more theoretical understanding of statistics. Therefore, you will be working with real data sets, and trying to solve real problems.

COURSE OBJECTIVES:

Students will utilize a number of different learning strategies to examine:

- Role of statistics in decision making within health sciences, and society as a whole
- Sources and kinds of quantitative data
- How to read and understand original scientific literature (in health-related fields)
- How research design influences analysis of quantitative data
- How quantitative data is displayed: charts, graphs, tables, etc.
- Data entry and statistical software
- Descriptive statistics: Measures of central tendency & measures of variation
- Probability and quantitative data
- Sampling and statistics
- Confidence intervals
- Hypothesis testing
- Introductory inferential statistics (chi-square, t-tests, ANOVA, correlation & regression)
- Parametric vs. non-parametric statistics tests
- Significance: Statistical vs. clinical significance
- How some people may "lie" with statistics
- How statistics and quantitative data are presented in research articles/journals
- So what?: How to base clinical and practical decisions on statistics

WHEN AND WHERE:

The course is scheduled as follows:

Class:

Section A:	Wednesday	15:00 – 17:50	Lecture Room TH201

Labs:

Wednesday	(Lab 1)	18:00 – 18:50	Computer Room AH 147
Wednesday	(Lab 2)	19:00 – 19:50	Computer Room AH 147

TEXTBOOKS:

Morgan, G.A., Leech, N.L., Gloeckner, G.W., & Barrett, K.C. (2013). *SPSS for introductory statistics: Use and interpretation* (5th ed.). Mahway, N.J.: Lawrence Erlbaum. ***OPTIONAL***

Plichta, B.S. & Kelvin E. (2013). *Munro's Statistical Methods for Health Care Research* (6th Ed.). Wolters Kluwer Health | Lippincott Williams & Wilkins. ***OPTIONAL***

Howard T. & Tokunaga (2016). Fundamental Statistics for the Social and Behavioral Sciences. SAGE Publications Inc. ***OPTIONAL***

Dancey, C.P., Reidy, J.G., & Rowe, R. (2012). Statistics for the Health Sciences A NON-MATHEMATICAL INTRODUCTION. SAGE Publications Inc. ***OPTIONAL***

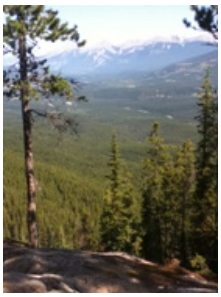
Aldrich, J.O. & Cunningham, J.B. (2016). Using IBM SPSS Statistics - An interactive Hands-On Approach (2nd Ed.). SAGE Publications Inc. ***OPTIONAL***

Kirkpatrick, L.E. & Feeney, B.C. (2015). A simple Guide to IBM SPSS for version 22.0. CENGAGE Learning. ***OPTIONAL***

COURSE INSTRUCTORS:

Your instructors for this course can be *best* reached by email, and will endeavor to get back to you within 48 hours (excluding weekends) of emailing:

Course and Lab Instructor:



Name: Jo-Anne Tomie

E-mail: tomie@uleth.ca (best way!)

Phone: 403-332-4415

Office: Markin Hall 3070 (3rd floor)

Office Hours: 9:00 a.m. – 11:00 a.m. (Mon/Fri) or by appointment

Graduate Student Lab Assistant:

Name: Oyindamola Olumuyide

E-mail: oyindamola.olumuyide@uleth.ca

Phone: 403-929-4463

Office: Markin Hall 3026 (3rd floor)

Office Hours: By appointment

GRADING BREAKDOWN:

The grading system for this course is consistent with that established in the Faculty of Health Sciences, effective May, 2002.

Letter		GPA	Percent	Letter		GPA	Percent
A+		4.0	95-100%	C+		2.3	71-74.9%
A	Excellent	4.0	91-94.9%	C	Satisfactory	2.0	67-70.9%
A-		3.7	87-90.9%	C-		1.7	63-66.9%
B+		3.3	83-86.9%	D+		1.3	59-62.9%
B	Good	3.0	79-82.9%	D	Poor	1.0	55-58.9%
B-		2.7	75-78.9%	F	Fail	0	0-54.9%

COURSE PROCESS:

It is generally well-accepted that we all learn better when our learning is ***active,*** and when we ***learn in groups***. In addition, being able to perform effectively in groups is not only an essential skill required in most employment settings and careers, but learning how to work and relate well with others can be an important factor in our own mental, emotional and physical well-being. Therefore, this course will require that as well as working as an individual, you will be working in a small team designed to increase your learning in this course – and a proportion of your grade (15%) will be assigned for teamwork and participation. Please see the 'assignments' section for more information.

How to Succeed in This Course:

Everyone generally likes to do well in their courses, and as this course has some components that you may not be familiar with (e.g., statistics, team-based learning), you may find the following tips and pointers helpful for your success in this course:

1) Read the course outline, particularly the sections on assignment marking and grading.
2) Be sure to ask your instructor if there is anything you do not understand about the course.
3) Make sure you budget **at least** 4-5 hours a week for this course (above and beyond class time) – to allow you to do the course readings, and prepare for quizzes and/or assignments.
4) Be sure to fully participate both as an individual learner, and as an important team member. You will be depending on your team for your portion of the team/group work in this course – and they will be depending on you – so please strive to be an active member of your team.
5) Pay careful attention to the feedback (non-graded) you will be receiving on your group participation in this course roughly ⅓ of the way through the course – it's the main way you'll find out how you need to improve on this aspect of the course, if need be.
6) If you find you would like to improve the marks on your quizzes, ask your team members and/or instructor for ways that you might improve your reading and/or study skills.

Creating a Positive Learning Environment:

You've all invested a lot of time and money in your education, and it's important that everyone helps to contribute to a learning environment that is as positive as possible. Therefore, all students will be expected to display (and encourage in each other) courtesy and respect during both the class and the labs. Therefore, please:

- Have shut off cell phones and beepers prior to class.
- Come to class on time, and stay the entire class, unless you have informed the instructor that you will be late or must leave early. If you miss a class for any reason, you are responsible for material covered, announcements made in class, materials distributed, etc.
- Stay focused on the class/discussion (e.g., please no checking emails, Facebook, etc. in class.)
- *Demonstrate respect to everyone by limiting side conversations during large group discussions and/or lectures (i.e., when we need to listen to what one person is saying). This is very important, and will be enforced, if need be, by the instructor(s) stopping class/lab and sitting down for as long as it takes to stop side-conversations, and/or having a discussion with you. If an instructor has to have more than one discussion with you about classroom respect, it may be grounds – in consultation with the Dean – for asking you to leave the class/lab/course.*

PLAGIARISM STATEMENT:

The University of Lethbridge subscribes to Turnitin.com, a plagiarism detection service. Please be advised that student work submitted for credit in this course may be submitted to this system to verify its originality. Students must be able to submit both electronic and hard copy versions of their work upon request.

ACCOMMODATIONS FOR STUDENTS WITH A DISABILITY:

Reasonable accommodations are available for students who have a documented disability. If you have been diagnosed with a disability, there is no need to face the challenge of University without support. Please contact the Accommodated Learning Centre to set up an appointment at 403-329-2766 http://www.uleth.ca/ross/counselling/index.html. After registering with the Accommodated Learning Centre, your instructor will be notified by a formal letter of any accommodations you require. In addition, students are responsible for requesting accommodations from the instructor at least ***two weeks*** in advance of the evaluation date. The instructor and student are jointly responsible for arranging the resources needed for the evaluation process.

COPYRIGHT STATEMENT:

All University of Lethbridge students, faculty and staff must comply with Canadian law and institutional license agreements pertaining to copyright. At the same time, keeping abreast of our copyright obligations and options is a complex task as copyright matters locally and globally are in flux and are likely to remain so for at least the near future.

The University's Copyright website (www.uleth.ca/copyright) is a source of current copyright information that includes:

- answers to common copyright questions (see the FAQs),
- guidance on whether you need permission or a license to copy a particular work (see the Copyright Permissions Flow Chart),
- guidance on assessing whether fair dealing may apply to specific instances of copying you wish to undertake (see the Guidelines for Copying under Fair Dealing), and
- a permissions look-up tool to help you determine the kinds of copying and other uses permitted by the Library's license agreements covering specific online journals and other online resources.

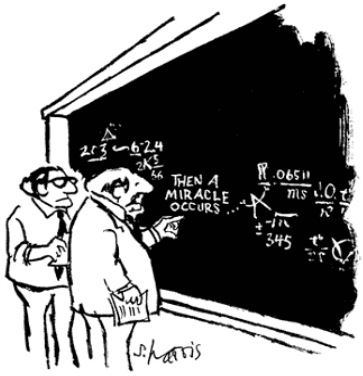
You are encouraged to contact the University Copyright Advisor (copyright@uleth.ca) for assistance with any copyright questions or issues.

HLSC 3450: COURSE SCHEDULE (tentative):

Date(Section)	Topic(s)	Reading/Assignments for this Date
Lecture 1 & Lab 1 January 6	- Statistics: Fear and loathing – or how to overcome fear and learn to love this course - Research problems, variables, research questions and hypotheses - Sampling Methods	- Morgan Chapter 1 - Munro (optional) Chapter 1 - PowerPoints for Lecture 1 - PowerPoints for Lecture 1 Sampling
Lecture 2 & Lab 2 January 13	- "Logic" behind research studies and data sets; Data coding and data entry, creating datasets, checking data for errors - Sources and kinds of quantitative data: Levels of measurement - Frequency plots and distributions - **Quiz #1 (lectures 1 & 2 & course outline)**	- Morgan Chapter 2 - Morgan Chapter 3 (pp. 37-45) - Munro (optional) Chapter 2 - PowerPoints for Lecture 2
Lecture 3 & Lab 3 January 20	- Central tendency and variability - The normal curve - **Quiz #2**	- Morgan Chapter 3 (pp. 47-52) - Munro (optional) Chapter 3 (pp. 68-72) - PowerPoints for Lecture 3
Lecture 4 & Lab 4 January 27	- Introduction to selecting inferential tests - Review of selecting tests and examples - **Quiz #3**	- Morgan Chapter 6 (pp. 91-101, ignore General Linear model on pp. 98-99) - Munro (optional) Chapter 4 - PowerPoints for Lecture 4
Lecture 5 & Lab 5 February 3	- Interpreting inferential statistics - probability, statistical significance, research & null hypothesis, type I & II errors - A brief introduction to Correlation using SPSS; Discuss Correlation and Causation	- Morgan Chapter 6 (pp. 91 – 107, ignore General Linear model on pp. 98-99) - Munro (optional) Chapter 4 - PowerPoints for Lecture 5 - PowerPoints for Lecture 5 Examples
Lecture 6 & Lab 6 February 10	- Cross-tabulation, chi-square & non-parametric measures of association using counts (nominal or dichotomous data) - **Quiz #4** **** half-way team evaluations – must participate in this to receive marks ****	- Morgan, Chapter 8 - Munro (optional) Chapter 12 - PowerPoints for Lecture 6 **- Midterm Review (one per team)**

Date(Section)	Topic(s)	Reading/Assignments for this Date
Reading Week February 17	**Due to Reading Week, classes and labs for HLSC 3450 are cancelled on February 17**	
Lecture 7 & Lab 7 February 24	- Correlation & introduction to regression - Multiple Regression - **Quiz #5**	- Morgan Chapter 9 - Munro (optional) Chapters 11 & 14 - PowerPoints for Lecture 7
Mid-Term Test March 2	**** <u>No class lecture</u>, but there will be a 1 hour Lab Exam Test (Midterm) **** - Lab #1 – write test on Wednesday, **March 2, 2016 @ 17:30 in AH 147** - Lab #2 – write test on Wednesday, **March 2, 2016 @ 19:00 in AH 147**	
Lecture 8 & Lab 8 March 9	- Comparing groups: t-tests and similar nonparametric tests - Brief introduction to Sampling - Interpretation of Confidence Intervals - **Quiz #6**	- Morgan Chapter 10 (pp. 173-182) - Munro (optional) Chapter 5 & 6 - PowerPoints for Lecture 8
Lecture 9 & Lab 9 March 16	- Analysis of variance (ANOVA) - Kruskal-Wallis Test - **Quiz #7**	- Morgan Chapter 11 (pp. 186-198) - Munro (optional) Chapter 7 - PowerPoints for Lecture 9
Lecture 10 & Lab 10 March 23	- Two-way Analysis of variance (ANOVA) - Introduction to other types of ANOVA and nonparametric equivalents - Writing and presenting papers for publication [presenting research findings (posters and presentations at conferences, journal articles, etc.) and ways of writing journal articles (e.g., APA format, with abstract, introduction, method, results, discussion, conclusion, references.)] - **Quiz #8**	- Morgan Chapter 11 (pp. 198-201) - Munro (optional) Chapters 8, 9, & 10 - PowerPoints for Lecture 10 - Munro (optional) Chapter 18 - PowerPoints for Lecture 10 on Presenting research
Lecture 11 & Lab 11 March 30	- Review of material to date & preparation for semi-open book final exam ***** Mandatory final peer team evaluations – Must complete peer evaluation to obtain grade for this section *****	- PowerPoints for Lecture 11 **Fill out your peer evaluations ready for submission in class** *****Electronic Copy <u>will not</u> be accepted*****

Date(Section)	Topic(s)	Reading/Assignments for this Date
Final Exam **April 20, 2016**	**FINAL EXAM IS SCHEDULED FOR WEDNESDAY, APRIL 20, 2016** **6:00 – 9:00 p.m., E section UHall labs** **Please note that there will be no make-up exam (earlier or later)** ******Please do not book holiday travel plans before April 26, 2016.******	



"I think you should be more explicit here in step two."

Assignments:

1) Midterm: Lab Test on Dataset (25%) – Wednesday, March 2, 2016

To get you going, you will be provided (in Week 2 lab) a handout with data and variable names.

You will then create an SPSS data set, using the variable names you have been given, and enter the data into your newly created data set. It is recommended you work with a partner while doing this. Your data set will contain 5 nominal variables, 4 normal (continuous) variables, and approximately 45 cases.

In combination with your various course resources (e.g., Table 3.3 in the Morgan text) and using SPSS:

1) Produce 5 frequency tables, one for each of the 5 nominal variables.
2) Produce appropriate visual plots (visual aids) for each of the 9 variables.
3) Using SPSS, compute **ALL** measures of central tendency and **ALL** measures of variability for each of the 4 normal (continuous) variables.
4) Using your resources (e.g., Figure 6.1 and pages 92-96 of Morgan), determine which statistical test is most appropriate for the following 3 research questions. Make sure you understand your rationale for choosing the test utilized for each of the three questions.
    a. What is the relationship between clients' gender and concurrent drug use?
    b. What is the relationship between clients' age and their confidence in quitting smoking?
    c. What is the relationship between clients' age and their scores on the DSM-IV-R Global Assessment of Functioning (GAF) Scale?
5) Using SPSS, run the appropriate test for each of the 3 research questions above (4a, 4b, and 4c).
6) Write up some brief notes that describe how you would interpret the SPSS output from the above questions, being sure to consider the following:
    a. The statistical significance of your results
    b. The strength and direction of any relationships you find
    c. Clinical significance/potential clinical implications arising from your analysis.

Please bring all your tables, output files, visual plots and notes from the above questions to the exam on **Wednesday, March 2, 2016.** The midterm will be directly based on the results from your analysis above and will contain a few other general questions from class materials.

Semi-Open Book MID-TERM EXAM IS DURING LAB PERIOD, Wednesday, March 2, 2016 – AH 147

2) Semi-Open Book Final Exam (35%) – Date, Time, and Location to be announced as soon as the Registrar's office lets the instructor know this information.

This semi-open book Moodle-based exam will build in part upon your experience with answering clinical research questions through the use of datasets, choosing the appropriate statistical tests, running the tests, and interpreting the results. It will consist of multiple-choice questions based on an expanded version of the smoking dataset, the generalsurvey.sav dataset, and theoretical questions based on the entire course material. You will be allowed to bring in a cheat sheet (one 8.5 x 11 sheet of paper with as much written on it as desired – front and back), answers to the page 10 course outline questions and SPSS output for these, Morgan tables 3.1, and 6.1, 6.2, 6.3, 6.4, and 6.5, and SPSS recipes). You will NOT be allowed to use any other resources (e.g., you will NOT be allowed to use the class and lab PowerPoints or any textbook), and you must complete the exam by yourself. The exam will be held in one of the on-campus computer labs, and the firm date and time will be announced as soon as the registrar is able to book the exam.

In preparation for the final exam, students will be provided with a new dataset called generalsurvey.sav during the first lab session following the mid-term exam. Utilizing their course resources and their growing knowledge of inferential statistics and statistical analysis utilizing SPSS, students will explore the following 12 variables: gender (gender), marital status (marital), education in years (educ), smoking history (smoke), current work status (work), political affiliation (polaff), depressed state of mind (depress), exercise (exer), satisfaction with current weight (satcurwt), satisfaction with weight at age 18 (satwt18), overall state of health (health), and experience anxiety (ipa5).

I. Consulting Table 3.3 in the Morgan text, run the appropriate descriptive statistics (measures of central tendency and variability), and create the appropriate visual plots for each of these 12 variables.

II. Consulting Morgan's Decision Tree (i.e., Tables 6.1 through 6.5, pp. 92-96), choose and run the best inferential statistics in SPSS to examine each of the following:
   a. Are there any significant associations between each of the following pairs of variables?
      - satisfaction with current weight & overall reported state of health,
      - satisfaction with current weight & experience anxiety,
      - satisfaction with current weight & depressed state of mind
      - overall reported state of health & experience anxiety
      - overall reported state of health & depressed state of mind
      - experience anxiety & depressed state of mind
   b. To what degree does education predict overall state of health?
   c. Is there a relationship between marital status and whether someone smokes or not?
   d. Are there differences in political affiliation based on current work status?
   e. Does the frequency of exercise vary significantly based on gender?
   f. Does the overall reported state of health vary significantly based on gender?
   g. Is there a relationship between a person's gender and the number of years of education that they have?
   h. Is there a significant change in a person's satisfaction with their weight from age 18 to the current day?
   i. Do ratings of current weight satisfaction vary significantly based on survey respondents' marital status?

III. Write up some brief notes that describe how you would interpret the results of the analysis you ran for Questions I and II, being sure to consider the following:
   a. The statistical significance of your results
   b. The strength and direction of any relationships you find
   c. Clinical significance/potential clinical/practical implications arising from your analysis.

3) <u>Individual Weekly Quizzes on Readings</u> (25%) – Start Lecture 2 (Wednesday, January 13, 2016)

To help you master the material for this course – and to help prepare you for productive and lively team work and discussions – there will be <u>eight</u> quizzes; approximately one each week. These quizzes will consist of multiple choice and/or short-answer questions and will be based on the daily readings in your course pack and the daily PowerPoint notes. The quizzes <u>will not</u> focus on ridiculously small details from your readings; instead, the quizzes will assess your ability to learn the main broad ideas and concepts presented each lecture in the course pack readings and PowerPoint notes. These short quizzes will be marked in class, so students will get immediate feedback on their performance each lecture.

Although there are **eight** weekly quizzes, ***your final mark will only include the marks from your six highest quiz scores.*** If you miss one or two quizzes for **any** reason (illness, dead battery in car, etc.), these missed quizzes will not be included in your final mark. If students miss more than two quizzes, they will only be allowed to write a make-up quiz (scheduled with their instructor) if they provide written documentation from a health care provider (counselor, MD, nurse, etc.) attesting to the extenuating circumstances preventing them from writing the quiz. Otherwise, the third and subsequent missed quizzes will be graded as zero, and will count as such towards your final grade.

In other words:

- If you write all 8 quizzes, only your 6 highest quiz scores count and the lowest two are deleted
- If you write 7 quizzes (and miss 1), your lowest score is deleted
- If you only write 6 quizzes (and miss 2), none of your lowest scores will be deleted
- If you write 5 or fewer quizzes (i.e., miss 3 or more), all of these will count, along with 1 or more quiz grades of zero so that your overall quiz grade is based on 6 quizzes. You will only be allowed to write a missed quiz if you provide valid documentation for your missed quizzes.

In addition to the **three individual assignments** (worth **85%** of your overall mark), there are also two **assignments that are related to group work** (worth **15%** of your overall mark) in this course. These assignments are:

4) Team Quizzes on Readings (10%) – Start Lecture 2 (Wednesday, January 13, 2016)

These are *exactly* the same quizzes as the individual quizzes (above). However, these quizzes will be written and given credit **as a team** (one quiz per team), and are written immediately after all students have completed the individual quiz. You will be allowed to discuss each question as a team, arrive at a consensus for each question – and then submit one quiz for your group. To instill some healthy competition ☺, the team scores for quizzes will be announced each lecture, but your individual quiz scores will remain confidential. As with the individual quizzes, only the best **six out of eight** group quiz scores will count towards your group quiz score mark (the lowest two are deleted).

You will only receive a group quiz score for a quiz if you have participated in that quiz (i.e., you also wrote the individual quiz). As with the individual quizzes, only your six highest quiz scores count. You will only receive credit for a missed team quiz if it is your third or subsequent missed team quiz and if you provide a valid note justifying your absence from that team quiz.

5) Team Participation Peer Evaluations (5%) – Ongoing – Due Wednesday, March 30, 2016

Relating and working well with others is incredibly important for our well-being, and it's therefore important to receive feedback on our work with others. You will have two formal evaluations on how your peers feel you are contributing to your team: one approximately half-way through the course (which does not contribute to your grade, but that you **must** participate with), and one at the end of the course (which will contribute to your final grade, and that you **must** participate with).

You will be peer-evaluated on several team-based performance criteria, including preparation, contribution, respect, flexibility, and group dedication. Your final team participation peer evaluation mark will consist of the average of your peer evaluations. For example, each of your team members will score you out of 50 for your team performance, so if you had 5 other team members, you will be given the average score out of 50 for the five peer evaluations. This average score out of 50 will then be transformed to a score out of 5, for your final team participation mark out of 5.

****Please be aware that if you do not participate in both the mid-term and final peer evaluations by submitting evaluations for your peers, you will receive a grade of zero for this assignment (without a valid medical/psychological reason for not doing so) ** Please also be aware that there**

must be strong evidence that you have been contributing to team problems and participating in class discussions to earn high scores in team participation peer evaluation.

For more information on how you will be assessed, please carefully review the criteria for team participation peer evaluations towards the end of this course outline.

Mid-Term Assessment of Overall Contributions of Team Members:

Team # _____

Name of Team Members: _____ _____ _____

_____ _____ _____

Please use this form to evaluate your team work to date. Please hand in one of these completed forms per group to the instructor, indicating your team # above.

1. As a group, please list two or three ways in which the members of your team have helped your team to be successful, and if appropriate, identify the member(s) who might be particularly good at each one.

   _____

   _____

   _____

   _____

   _____

2. As a group, please identify what the members of your team could do that would help most to improve your team's performance.

   _____

   _____

   _____

   _____

   _____

3. If applicable, please identify a few things that the instructor could do better or differently to improve your team's performance, or the course in general.

   _____

   _____

   _____

   _____

   _____

Final Assessment of Overall Contributions of Team Members:

Your Team # _____ **Your Name** _____

Please rate your team members (all but yourself) from 1 to 10 to reflect how you really feel about the extent to which the other members of your team contributed to your team's learning and performance (***over the course of the whole semester)***, using the following five team performance characteristics. This is your main opportunity to reward the members of your team who worked hard and helped make your team a positive and productive one. ***Please note that if you give everyone pretty much the same score/rating, you may be penalizing those who worked the hardest, and rewarding those who did not work as hard.***

Preparation (Had they prepared & done readings prior to class?)

1----------2----------3----------4----------5----------6----------7----------8----------9----------10

Completely inadequate preparation	Just adequate preparation	Extremely well prepared

Contribution (Did they contribute productively to group discussion and work?)

1----------2----------3----------4----------5----------6----------7----------8----------9----------10

Little or no contributions	Contributes, but just enough to get by	Exceptional contributions

Respect (Did they show respect for other people, and encourage others' ideas?)

1----------2----------3----------4----------5----------6----------7----------8----------9----------10

Little or no Respect	Generally respectful of others	Extremely respectful

Flexibility (Were they flexible and open-minded during disagreements?)

1----------2----------3----------4----------5----------6----------7----------8----------9----------10

Little or no flexibility	Sufficiently flexible	Exceedingly flexible and open

Dedication (Punctuality, class attendance, communication with group during absences?)

1----------2----------3----------4----------5----------6----------7----------8----------9----------10

Little or no Dedication	Acceptable dedication to team	Excellent dedication to team

*********NOTE: **This cover page must be submitted along with the other pages of your team participation/peer evaluation.**

1) Team Member's Name: _____

a) Preparation: _____

b) Contribution: _____

c) Respect: _____

d) Flexibility: _____

e) Dedication: _____

2) Team Member's Name: _____

a) Preparation: _____

b) Contribution: _____

c) Respect: _____

d) Flexibility: _____

e) Dedication: _____

3) Team Member's Name: _____

a) Preparation: _____

b) Contribution: _____

c) Respect: _____

d) Flexibility: _____

e) Dedication: _____

4) Team Member's Name: _____

a) Preparation: _____

b) Contribution: _____

c) Respect: _____

d) Flexibility: _____

e) Dedication: _____

5) Team Member's Name: _____

a) Preparation: _____

b) Contribution: _____

c) Respect: _____

d) Flexibility: _____

e) Dedication: _____

6) Team Member's Name: _____

a) Preparation: _____

b) Contribution: _____

c) Respect: _____

d) Flexibility: _____

e) Dedication: _____